

Executive Summary



The concept of mitigation, as expressly identified or implicit in the mission and statutory direction of the Department and its bureaus, is an essential element in how the Department manages the lands and resources under its jurisdiction. In response to Secretarial Order Number 3330 entitled “Improving Mitigation Policies and Practices of the Department of the Interior,” issued by Secretary of the Interior Sally Jewell in October 2013, this report highlights the challenges and opportunities associated with developing and implementing an effective mitigation policy, and describes the key principles and actions necessary to successfully shift from project-by-project management to consistent, landscape-scale, science-based management of the lands and resources for which the Department is responsible. In so doing, we believe that the natural and cultural assets stewarded by the Department can be managed more efficiently, effectively, and responsibly for the greater good of the nation.

To address the challenges associated with mitigation and improve practices while accommodating both infrastructure development and the conservation needs of America’s rapidly changing landscapes, the Department and its bureaus need mitigation policies and practices that a) more effectively avoid, minimize, and compensate for the impact of development on Department-managed lands and resources; b) provide better information and greater predictability to project proponents and land managers; c) improve the resilience of our Nation’s resources in the face of climate change; d) encourage more strategic conservation investments in lands and other resources; and e) increase compensatory mitigation effectiveness, durability, transparency and consistency.

Taking a landscape-scale approach to mitigation can meet these needs while improving permitting efficiencies, reducing conflict, and better achieving

development and conservation goals. In the mitigation context, the landscape approach dictates that it is not sufficient to look narrowly at impacts at the scale of the project; it is necessary to account for impacts to resource values throughout the relevant range of the resource that is being impacted. In order to realize the promise of landscape-scale mitigation, the Department and its bureaus will institute policies and procedures that reflect the following guiding principles:

1. **Landscape-scale:** *Incorporate landscape-scale approaches into all facets of development and conservation planning and mitigation.*
2. **Full Hierarchy:** *Utilize the full mitigation hierarchy in project planning and review.*
3. **Promote Certainty:** *Establish protocols to simplify planning and project review while improving operational certainty for project proponents.*
4. **Advance mitigation planning:** *At the outset of the project planning process, incorporate mitigation and landscape objectives into the design and development of projects that are likely to impact natural or cultural resources.*
5. **Science and Tools:** *Develop and utilize the scientific information and tools necessary to identify the most efficient and effective means of mitigating the effects of development and to inform monitoring and evaluation of mitigation efforts.*
6. **Foster Resilience:** *Identify and promote mitigation efforts that improve the resilience of our Nation’s resources in a rapidly changing climate.*
7. **Durability:** *Ensure that mitigation measures are durable.*
8. **Transparency:** *Promote transparency and consistency in the development of mitigation measures.*
9. **Collaboration:** *Coordinate with other federal and state agencies, tribes, and stakeholders in conducting assessments of existing and projected resource conditions, forming mitigation strategies, and developing compensatory mitigation programs.*
10. **Monitoring:** *Monitor and evaluate the results of mitigation over time to ensure that the intended outcomes are achieved.*

To effectively integrate these guiding principles and enhance the ability of state and federal agencies to address wildland fire, invasive species, climate change and other large-scale stressors, the Department’s management bureaus are moving toward a landscape approach to managing resources. The landscape approach to mitigation involves four distinct steps:

1. Identifying key landscape-scale attributes, and the conditions, trends, and baselines that characterize these attributes;

2. Developing landscape-scale goals and strategies;
3. Developing efficient and effective compensatory mitigation programs for impacts that cannot be avoided or minimized; and
4. Monitoring and evaluating progress and making adjustments, as necessary, to ensure that mitigation is effective despite changing conditions.

This report describes planned outcomes and next steps for each of these phases, as well as a number of near-term deliverables for the Department and its bureaus. Departmental bureaus are currently advancing this landscape approach to mitigation in various contexts, and anticipate that the strategy will evolve over time. This work is being conducted in collaboration with other federal, state, and tribal agencies, non-governmental organizations, and commercial interests.

This report describes an advanced form of collaborative problem-solving at a time when the uncertainties of a rapidly changing climate and the imperative of an energy transformation pose challenges for sustaining the natural ecosystems that buffer us from extreme weather events and play a fundamental role in the maintenance of America's clean air, clean water, agricultural productivity, world class recreational opportunities, and economy. This report, and the strategy it describes, is the Department's first step in building upon the innovative efforts that have been emerging across the Country to avert resource conflicts prior to development and to advance sustainable solutions that ensure the highest and best use of our natural resources.



On October 31, 2013, the Secretary of the Interior issued Secretarial Order Number 3330 entitled “Improving Mitigation Policies and Practices of the Department of the Interior.” The Order charged the Department’s Energy and Climate Change Task Force (Task Force) with developing a coordinated Department-wide strategy to strengthen mitigation practices:

The purpose of this Order is to establish a Department-wide mitigation strategy that will ensure consistency and efficiency in the review and permitting of infrastructure development projects and in conserving our Nation’s valuable natural and cultural resources. Central to this strategy will be (1) the use of a landscape-scale approach to identify and facilitate investment in key conservation priorities in a region; (2) early integration of mitigation considerations in project planning and design; (3) ensuring the durability of mitigation measures over time; (4) ensuring transparency and consistency in mitigation decisions; and (5) a focus on mitigation efforts that improve the resilience of our Nation’s resources in the face of climate change.

The Department has management responsibility over much of our Nation’s federal lands, waters, and other natural resources. Steward for 20 percent of our Nation’s lands, the Department oversees the development of over 20 percent of U.S. energy supplies, is the largest wholesaler and manager of water in the 17 western states, and provides services to over 500 federally recognized tribes and Alaska Native communities. In addition, the Department is responsible for the conservation and management of fish and wildlife resources, including over 800 native migratory bird species and nearly 2,000 federally listed threatened and endangered species. The Department also preserves and manages over 400 units of the National Park System and provides leadership for the National Historic Preservation Program, which guides the preservation of cultural resources both on and off the federal lands.

Given the inherent and sometimes difficult conflicts associated with the Department’s responsibilities for both managing development and conserving the natural and cultural resources of the Nation’s lands and waters, effective mitigation of the impacts of development is critical in enabling the Department, through its bureaus, to fulfill its statutory mandates. This report describes the rationale and the principles that will govern a Department-wide, landscape-scale approach to mitigation that fulfills the five purposes set forth in the Secretarial order and noted above. It also documents a number of actions that the Department and its bureaus will take in the coming months to further develop and implement the landscape-scale mitigation policy.

As directed in the Order, the Task Force report team conducted extensive outreach to many of our fellow federal agencies that conduct mitigation as well as several states and a subset of other stakeholders and partners (Appendix II). Due to the scope of mitigation efforts nationwide, this outreach effort will necessarily continue over the coming months as the Department works to implement an overarching mitigation framework consistent with the principles described in this report. To advance those efforts and provide the building blocks for its comprehensive new approach to mitigation, this report provides:

- a) A primer on the concept of mitigation and how it has been applied;
- b) A description of some of the key challenges that the Department and other agencies have faced in implementing effective mitigation;
- c) A Departmental strategy for overcoming those challenges, including a set of guiding principles that will govern the Department’s landscape-scale mitigation efforts;
- d) Initial actions to be taken by the Department and its bureaus and agencies to implement a consistent and integrated landscape-scale mitigation policy;
- e) A list of deliverables and timelines for developing or revising landscape-scale mitigation policies and practices of the Department;
- f) A representative sample of some of the ongoing efforts that embrace the principles described in the strategy;
- g) A brief summary of the mitigation aspects of the Department’s existing management practices and procedures, permitting, and legal authorities (Appendix I);
- h) A list of some of the agencies and partners contacted during outreach for this report (Appendix II).

The concept of mitigation, as expressly identified or implicit in the mission and statutory direction of the Department and its bureaus and agencies, is an essential element in how the Department manages the lands and resources under its jurisdiction. The purpose of this report is to highlight the challenges and opportunities associated with developing and implementing an effective mitigation policy and to describe the key principles and actions necessary to successfully shift from project-by-project management to consistent, landscape-scale, science-based management of the lands and resources for which the Department is responsible. In so doing, we believe that the natural and cultural assets stewarded by the Department can be managed more efficiently, effectively, and responsibly for the greater good of the nation.

Mitigation: Origin, Purpose, and Basic Concepts

Origins

The Fish and Wildlife Coordination Act of 1934 included requirements that were the first formal expressions in law of a duty to minimize the negative environmental impacts of major development projects and to compensate for those impacts that remained – giving birth to the core ideas of what we now label as environmental mitigation. In the ensuing decades, environmental mitigation has come to play a key role in many other statutes and programs. Contemporary understanding of mitigation has benefited from decades of scientific advances and experience implementing the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the wetlands protection provisions of Section 404 of the Clean Water Act, the National Historic Preservation Act (NHPA) and other federal and state laws.

Under NEPA, federal agencies that are required to evaluate the environmental impacts of proposed federal actions may incorporate mitigation measures to reduce the impacts of the action. The Federal Land Policy and Management Act (FLPMA) requires that “the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.” The habitat conservation planning provisions of Section 10 of the ESA have proven sufficiently flexible

to provide the basis for either mitigation for the impacts of small, single-landowner development projects or broader regional conservation plans that offset the impacts of multiple projects undertaken by multiple landowners or project proponents. The Clean Water Act has spawned creative approaches to mitigation, including banking and in-lieu fee arrangements that seek to improve upon the outcomes of more typical, project-by-project mitigation efforts. The Clean Air Act has also encouraged innovative market-based approaches for reducing air emissions while also capturing cost savings.

Major energy and infrastructure development projects, both on land and offshore, can adversely affect a broad array of resources and values, including fish and wildlife, cultural resources, unique natural communities, scenic views, air quality, recreational opportunities, and water supplies for human use. For certain resources – including wetlands, endangered species, cultural resources, national parks, wildlife refuges, and wild and scenic rivers – there are explicit statutory and regulatory drivers requiring mitigation.^{1,2} For other resources, mitigation decisions have been driven by the more broadly stated requirements of statutes such as NEPA and FLPMA.

The Hierarchical Approach to Mitigation

As used in this report, the term “mitigation” encompasses the full suite of activities to **avoid, minimize, and compensate** for adverse impacts to particular resources or values. In the implementation of both NEPA and the Clean Water Act, there has developed a mitigation “hierarchy” or sequence of steps through which mitigation is typically achieved. The hierarchy starts with avoidance. If a project can reasonably be sited so as to have no negative impacts to resources of concern then that is generally the most defensible approach. By avoiding adverse impacts in the first place, there is no need to take further action to minimize or offset such impacts. If the authorization of the proposed action requires compliance with NEPA, NHPA, and/or ESA, determining whether or not adverse effects may occur is carried out through a public process for impact analysis and interagency consultation processes.

Frequently, however, it is not practical or possible to avoid negative impacts altogether. A linear project such as a road or pipeline may of necessity entail a number of stream or wetland crossings, for example. In such cases, the second step of the mitigation hierarchy seeks minimization of the associated impacts. For example, altering design features or integrating pollution control technologies could substantially minimize impacts to the immediate site, to human health and safety, and to nearby affected



resources in special status areas like national parks or wilderness areas. In the case of cultural resources, steps may be taken to minimize adverse effects by, for example, choosing paint colors or reducing the height of oil and gas tanks to reduce visual impacts. If the impacts cannot be adequately minimized, a project in a given location may not be appropriate and the permit denied.

Remaining steps in the mitigation hierarchy seek to repair, rehabilitate, or restore the affected environment or resource, and ultimately to compensate for, or offset, any impacts that remain. For example, compensating for unavoidable wetland impacts may include creating new wetlands where none previously existed, or restoring and protecting wetlands where they were damaged or destroyed. In still other cases, this type of mitigation might take the form of acquiring and bringing under long-term protection an existing, fully functional wetland. While the preservation of existing wetlands is an uncommon form of compensatory mitigation under the Clean Water Act, permanently preserving existing habitat is a common form of compensatory mitigation under the ESA.³

It should be noted that the term “mitigation” is sometimes used to refer only to the final step in the sequence described here. Thus, one sometimes sees the mitigation hierarchy somewhat confusingly described as “avoid, minimize, and mitigate.” For clarity, when referring to the final step in the hierarchy, this report will use the term “compensatory mitigation.” The term “mitigation” will refer to all of the steps in the hierarchy.

Although this hierarchical approach to mitigation includes a strong presumption in favor of the sequence described above, there are circumstances in which rigid adherence to the sequence may not realize the greatest overall benefit. There may, for example, be circumstances in which already-degraded habitat can be *avoided* or certain *minimization* measures are economically feasible, and yet other *compensatory* mitigation measures could achieve a better environmental outcome at less cost. In such situations, a rigid adherence to the mitigation hierarchy might not best serve the goals and purposes of the statutes that provided the basis for mitigation requirements. Similarly, some endangered species may occupy sites that are ephemeral in nature or facing major threats not subject to regulatory control. In such cases, greater conservation benefit may be secured by compensating elsewhere for the loss of such sites than by avoiding development in them.

Forms of Compensatory Mitigation

Mitigation requirements – including compensatory mitigation requirements – are often imposed as a condition of a permit issued to a project sponsor by a regulatory agency. Traditionally, the permittee either

carries out the compensatory mitigation itself, or pays to have it done by another party (known as permittee-responsible mitigation).

Another mechanism for implementing compensatory mitigation is known as mitigation “banking.” This approach may be used where there might be economic efficiencies as well as better environmental results if compensatory mitigation actions are carried out in advance of foreseeable future projects, or if a single large mitigation action could compensate for the impacts of multiple future development projects. This approach allows for “banking” credits earned for early compensatory mitigation actions, and later drawing down against those banked credits as new development projects are undertaken. Wetland and stream banks have been developed under the CWA, and habitat conservation banks have been developed under the ESA. Mitigation banking is specifically provided for under the Clean Air Act with regard to emission controls and the siting of new facilities.

Two forms of mitigation banks are used. In one, credits from the bank are intended to be used to offset projects carried out by the bank creator. Other banks, however, earn credits that can be sold to third parties whose projects require compensatory mitigation. These multi-user banks are often called “entrepreneurial banks” because they are frequently established by for-profit businesses that seek to provide a specialized service (e.g., creation, restoration, or enhancement of wetlands) to others.

Yet another form of compensatory mitigation is referred to as “in-lieu fee” mitigation. This mechanism allows a project developer to satisfy its compensatory mitigation responsibilities by paying a fee to a third party (often a state agency or a conservation non-governmental organization, or NGO), with the assurance that the third party will use the fees to carry out future conservation actions. Some in-lieu fee arrangements initially received limited oversight, with fees sometimes accumulating for lengthy periods and ultimately being used for purposes that may not have offset authorized impacts. Under the Clean Water Act, however, recent regulatory revisions have addressed these shortcomings and reduced some of the distinctions between mitigation banks and in-lieu fee mitigation arrangements.

It is important to ensure that the mitigation measures required under different forms of compensatory mitigation actually offset the impacts of the authorized project – that is, ensure that the offsets are comparable to the impacts. There are multiple methods for establishing such comparability. For example, ratios are often used (for example, a 2:1 ratio requirement in which two acres of endangered species habitat

are restored or enhanced elsewhere for every acre of habitat lost) to ensure that the required mitigation offsets the project impacts, and to account for uncertainty, temporal losses, and other factors. In other cases, more sophisticated methods that focus on functional losses may be used.

Science in Support of Mitigation

The quality of mitigation decision-making depends, in large part, upon the quality of available information. Science informs mitigation decisions by providing: 1) a solid foundation for understanding the status, function, value, and drivers of change to natural resources within proposed development areas, 2) a basis for evaluating the tradeoffs associated with alternative mitigation strategies, 3) data and tools for measuring and understanding the short and long-term impacts of proposed projects, and 4) monitoring protocols to understand the effectiveness of mitigation actions relative to their design objectives. Throughout the process, quality science provides value-neutral data that

increases credibility and transparency, provides a factual basis for policy and agency decisions, and ultimately ensures that the mitigation design-process and resulting actions are supported by relevant knowledge. Science is particularly important for evaluating mitigation performance relative to predicted performance, thereby enabling adaptive management and the ongoing improvement of avoidance, minimization, and compensatory actions.

When underpinned by sound science, an array of tools can be used to significantly enhance and inform decision-making, provide a basis for the analysis of costs, benefits and trade-offs, and aid in understanding the long-term impacts of near-term decisions. These science-based tools include geospatial data integration, remote sensing, predictive modeling, habitat evaluation, scenario development, and forecasting and simulation, along with traditional tools like natural histories and condition assessments of species and communities.



Chapter 3:

Mitigation Challenges

In practice, the application of the mitigation hierarchy to manage the lands and resources under the Department's jurisdiction presents numerous challenges for land managers, project proponents, and other stakeholders. These challenges complicate not only the application of mitigation and other management tools, but also the ability to measure progress toward established mitigation goals. In this chapter we describe several of the major mitigation challenges, and in succeeding chapters we present a strategy for addressing them, including ways to enhance the effectiveness of the Department's overall mitigation policies and practices.

1. Resources at Risk:**Increasing Pressure and Cumulative Impacts**

Not surprisingly, predictions suggest that pressures on natural and cultural resources will increase with population growth. ⁴Our lands, air and waters are increasingly in demand for a wide diversity of uses including recreation, energy development – both renewable and conventional – and other forms of commerce. The *cumulative* impacts of these uses are having a significant effect on the landscape. The term cumulative impacts refers to the combined effects of human activity on a resource or community; impacts of an action may be relatively insignificant on their own, but as they accumulate over time and combine with the impacts from other sources they can lead to significant overall degradation of resources.

To date, analyzing and addressing these cumulative impacts has proven challenging. In the case of air quality, for example, a single oil and gas well or small group of wells generally cannot be identified as causing an exceedance of a specific threshold—be it a health based standard or a requirement to protect visibility in national parks. Tools exist, however, for analyzing cumulative impacts from multiple wells and determining whether mitigation is needed on individual operations to avoid exceedances.

2. Changing Climate: Increasing Uncertainty

Climate change has many known and potential impacts. Known impacts include increased temperature and evaporation, changes in precipitation patterns, extreme weather events, sea level rise and higher storm surge. These impacts can have significant effects on the natural and cultural resources managed by the Department, including changes in stream flow, increased wildfire risks, increased spread of invasive species, changes to wildlife health and behavior, and increased occurrence of flood

damage to historic properties. In addition to ecological impacts, climate change presents profound implications for social, cultural, and economic conditions. Science suggests that regions such as the Arctic are moving toward conditions never before witnessed.⁵ The increasing uncertainty of near and long-term impacts of a changing climate requires decision-makers to manage toward less predictable future scenarios, and limits the effectiveness of current management tools that are based on more predictable variables, such as historical condition.

This increased uncertainty can have a significant effect on mitigation efforts that are designed to address impacts well into the future – impacts that cannot be easily predicted. New tools and approaches are necessary to allow managers to consider a range of plausible scenarios, make contingency plans, assess the resilience of the proposed mitigation strategies, provide for adaptive management, and ensure a precautionary approach in the face of uncertainty.

3. Science: Assessments, Baselines, Monitoring and Evaluation

The lack of adequate scientific information can be a constraint in the implementation of mitigation efforts. Scientific baselines that are necessary for understanding, monitoring and evaluating resources and their interactions are not always available. Without baseline information and an understanding of the complex interactions within and between natural systems, developing useful, quantifiable measures of mitigation success is extremely difficult. Effective and consistent monitoring of mitigation efforts at multiple scales is also needed to ensure that the measures are actually undertaken and that these measures are accomplishing their intended results. Fiscal resources should be allocated to ensure that monitoring and evaluation take place, particularly for system level impacts, multiple stressors, and/or the durability of the mitigation over the lifetime of the mitigation period.

When the science is inadequate, the promise of mitigation may not be realized, leading to potential ecological and compliance failures. In the case of salmon in the Pacific Northwest, for example, hatcheries were intended to compensate for the unavoidable loss of naturally spawning fish caused by dams. Unfortunately, however, it has turned out that artificial production of salmon has negatively impacted wild salmon stocks through competition for space and food, predation by

hatchery fish on wild stocks, introduction of disease and parasites, and a host of other factors.

To add to the challenges, effective mitigation requires many different types of scientific information and processes. Examples of scientific requirements for effective mitigation include monitoring conditions and processes in a comprehensive and consistent manner across jurisdictional boundaries; quantifying resources in both the impacted and mitigated areas; developing a system of metrics for adequately analyzing the comparability of development impacts and compensatory mitigation actions; assessing habitat quality for specific species of interest and assigning ecological equivalence to different locations; identifying tipping points that may lead to major degradation of natural and cultural resources and ecosystem services; developing models that accurately simulate environmental conditions in order to assess future possible scenarios; and providing useful data and training to land managers.

4. Durability of Mitigation

The durability of mitigation efforts over time is another important area of concern. To be successful, compensatory mitigation measures must be effective at least as long as the impacts – specifically those impacts the measures are designed to offset. Easements, covenants, and title conveyance are all widely used mechanisms that can ensure against new actions that harm resources on private land. However, many mitigation areas also require ongoing management to prevent dumping, control invasive plants, respond to natural or human-caused disturbances, and address unexpected contingencies. Such management often requires significant financial resources.

Thus, a key challenge in ensuring the durability of mitigation efforts is ensuring the availability of needed resources over the long term. On federal lands, the challenge of ensuring durability of mitigation efforts has two added dimensions in that the laws applicable to such lands may restrict long-term encumbrances upon them and agency action is often dependent on yearly appropriations. Further complicating matters, current regulatory structures may restrict federal agencies from requiring compensatory mitigation beyond the life cycle of the project, which, even if the project site is later reclaimed, may not represent the full duration of the impacts.

5. Additionality of Mitigation Measures

The goal of compensatory mitigation is typically to offset a proposed development action's expected impact on a resource value through conservation

measures that create, restore, enhance, or protect that same resource value in another location. For this goal to be achieved, it is essential that the offsetting conservation measures would not otherwise have occurred. If they would otherwise have occurred, then the impacts of development will not have been offset. In short, the beneficial effects of compensatory mitigation must be *additional* to what would otherwise have occurred.

When compensatory mitigation takes place on private land, it is usually not difficult to demonstrate additionality. When compensatory mitigation takes place on public lands, however, demonstrating additionality can be more problematic. The Fish and Wildlife Service, as a general matter, does not allow wetland restoration on National Wildlife Refuges to serve as compensatory mitigation for wetlands losses elsewhere, because the Service is already committed to restoring wetlands on its Refuges – wetland restoration efforts on Refuges would not be additional to what would otherwise happen there. For other land managing agencies with missions that encompass conservation, sorting out what would likely have occurred anyway from what will occur only because of compensatory mitigation initiatives is often very complex, entailing consideration of not only agency authorities, but possibly also agency budgets, plans, and historical practices.

6. Issues of Scale

Project-by-project compensatory mitigation, particularly when guided by a rigid presumption that such mitigation should be located as near to the impact site as possible, can be inefficient and ineffective for many reasons. Most notably, the narrow focus of project-by-project development and associated mitigation foregoes the opportunity to consider and address broadly the full impacts of a project upon the functional values of the place that is impacted. By examining the conservation needs of a more expansive area, such as a watershed or landscape, it may be possible to determine how mitigation decisions could more effectively and efficiently compensate for the project's impacts. Limited by scale and scope, project-by-project mitigation is more likely to result in inefficient use of mitigation resources and can reduce overall environmental benefit.

Adding to the challenge of addressing impacts at larger scales, the lack of landscape-scale scientific information, and the tools to use it, can make it difficult to identify and prioritize mitigation opportunities at a greater scale. If available at the appropriate scale, such information could be

incorporated into decision support tools that would help policy makers and managers to better plan landscape-scale mitigation.

7. Timeliness of Mitigation Considerations

The timing of mitigation considerations can be a concern for permitting agencies, project proponents and the public. Project planning involves many steps, and mitigation requirements are often inconsistently addressed and take place late in the planning process. The failure to coordinate these considerations at an early stage in the permitting process can result in efforts that are unsatisfactory for the permitting agency, inefficient or costly for the project proponent, and/or ineffective as mitigation measures – an outcome frustrating for all partners and stakeholders. When a project proponent is required to provide costly compensation for impacts that may have been avoided if mitigation expectations were understood and addressed early in the planning process, for example, both the proponent and the resources being impacted suffer.

Discussions early in the process can facilitate the application of the mitigation hierarchy and help to avoid or minimize environmental impacts before more costly mitigation efforts are planned. Without these early discussions, project proponents can face uncertain requirements and costs, constraints that may compromise the success or sustainability of development efforts.⁶

8. Consideration of the Full Mitigation Hierarchy

Although mitigation includes avoidance, minimization, and compensation, the structures and procedures that have been developed to accommodate *compensatory* mitigation provide the clearest guidance thus far for project proponents and resource managers. Because of this and because few managers have the information and resources in place to consider issues and impacts across a landscape scale, reported mitigation activities tend to focus primarily on well-established compensatory mitigation approaches at a project site, and typically do so on a project-by-project basis. Although not all impacts can be avoided, there is currently no clear guidance on how to develop and apply avoidance criteria or how to measure and evaluate the degree to which avoidance was considered as an option. While mechanisms to encourage avoidance have been incorporated into some bureau planning and development functions in recent years (e.g., Western Solar Energy Plan and Master Leasing Plans), greater attention to avoidance early in the proposal process can help forestall considerable expense and/or conflict for the project proponent.

9. Transparency and Efficiency

Because compensatory mitigation at a landscape scale inherently involves making tradeoffs between resources, the transparency of mitigation decision-making is particularly important. Where clearly described and justified mitigation ratios or other criteria exist, are publicly available, and are consistently followed, transparency is seldom a concern. In the absence of such ratios or other criteria, however, mitigation decisions can appear to be ad hoc rather than principled, giving rise to the suspicion that those decisions are influenced by political or other inappropriate considerations. Coordination, consultation, and collaboration are essential to transparency. While some statutes, such as NHPA, require outreach and transparency, such measures are often not fully realized.

In addition to transparency, efficiency is an ongoing concern for project proponents concerned about the length of time it can take to acquire a permit. Studies are beginning to provide guidance for advancing more efficient, effective approaches to compensatory mitigation planning while ensuring opportunity for meaningful public input into such planning. For example, a recent analysis of Clean Water Act Section 404 permitting data shows that mitigation banks and in-lieu fee programs result in a shorter average time to permit than both on-site permittee-responsible mitigation and off-site permittee-responsible mitigation for wetland and stream mitigation. On average, mitigation banks took 107 days to permit and in-lieu fee programs took 123 days, while permittee-responsible mitigation took 189 days for on-site, and 222 days for off-site. Reduced permitting time can help decrease uncertainty for developers and increase mitigation efficiency.⁷ The challenge is to reduce permitting times and uncertainty without sacrificing the opportunity for meaningful public input.

10. Collaboration

Although working at the landscape scale provides the best approach for addressing the challenges described above, it often requires the involvement of a number of partners – particularly for those efforts that cross jurisdictional boundaries and involve multiple government agencies. Effective coordination among federal, state, tribal, and local agencies, and private and NGO landowners and stakeholders can avoid duplication and lead to more effective mitigation efforts. In addition, certain situations may arise where appropriate large-scale mitigation efforts could benefit some agencies and adversely affect others. Mechanisms need to be developed both at the Departmental and interagency level to address these potential conflicts.



Finally, it should be noted that all of the above concerns exist even when the impacts to be mitigated involve only a single type of resource, such as an endangered species or a wetland. Mitigation becomes much more complicated when the goal is to address impacts to a variety of resources, including species, habitats, historic and cultural resources, water quantity and quality, air quality, scenic views, night skies, natural soundscapes and others. Conducting a comprehensive assessment and developing a mitigation plan for these different resources and associated ecological services at the landscape scale is a major challenge in light of current capabilities and the requirements of the various laws that apply. The fact that primary responsibility for these various resources may rest with several different state and federal agencies adds still more complexity. The coordination of mitigation decisions among several agencies must be a primary focus as the Department develops a landscape-level approach to mitigation.

Meeting the Challenge

As a result of the many complexities and challenges described above, the application and effectiveness of the mitigation hierarchy to date has been uneven and difficult to evaluate. Rigid bureaucratic procedures are now straining to accommodate escalating expectations for federal lands at the same time that the resilience of those lands is increasingly compromised by rapid environmental change. Over a decade ago, the EPA

requested that the National Research Council (NRC) form a committee to evaluate the practice of compensatory mitigation for wetlands. In 2001, the NRC report found that compensatory mitigation projects “often are not undertaken or fail to meet permit conditions.” More recently, mitigation experts have noted, “[T]he way mitigation is currently applied does not capture cumulative impacts associated with development; it does not provide a structured decision-making framework to determine when projects can proceed or should be avoided; and it does not harness the full potential of offsets (conservation actions applied away from the development site).”⁹

To address these challenges and improve mitigation practices while accommodating both infrastructure development and the conservation needs of America’s rapidly changing landscapes, the Department and its bureaus need modern mitigation policies, procedures and practices that more effectively avoid, minimize, and compensate for the impact of development on the lands and resources under the Department’s jurisdiction; provide better information and greater predictability to project proponents and land managers; improve the resilience of our Nation’s resources in the face of climate change; encourage more strategic conservation investments in lands and other resources; and increase compensatory mitigation effectiveness, durability, transparency and consistency. The following chapters describe a strategy for developing such policies and procedures.

Landscape-Scale Mitigation Strategy: Guiding Principles

Mitigation is an essential part of the Department's efforts to implement its mission and those of its bureaus. The challenges described in the previous chapter present important considerations for improving Departmental mitigation policies and procedures. The strategy described in the following chapters addresses these challenges head-on in order to enhance the efficiency and effectiveness of mitigation practices at the Department.

This strategy advances ongoing efforts at the Department to embrace a landscape-scale approach to managing natural and cultural resources and improve the implementation of the mitigation hierarchy. The term "landscape-scale" can represent many different spatial scales depending on the resource values being managed. For the purposes of this report and related Departmental efforts, a "landscape" is defined as a large area encompassing an interacting mosaic of ecosystems and human systems that is characterized by a set of common management concerns. The landscape is not defined by the size of the area, but rather by the interacting elements that are meaningful to the management objectives.

In the mitigation context, the landscape approach dictates that it is not sufficient to look narrowly at impacts at the scale of the project; it is necessary to account for impacts to resource values throughout the relevant range

of the resource that is being impacted. While "landscape-scale" and "regional" are not synonymous, they indicate a similar consideration of interacting systems at a scale larger than the ecosystem, and should not be constrained by administrative boundaries.

As described below, a landscape-scale approach to mitigation – in contrast to project-by-project and single-resource mitigation approaches that focus on small spatial areas – can improve permitting efficiencies, reduce conflict, and better achieve development and conservation goals. Such an approach provides a broader palette of mitigation opportunities and improves the opportunity for mitigation success.

Guiding Principles for Landscape-Scale Mitigation

In order to realize the promise of landscape-scale mitigation, the Department and its bureaus will institute policies and procedures that reflect the following guiding principles:

1. **Landscape-scale:** *Incorporate landscape-scale approaches into all facets of development and conservation planning, project review, and mitigation implementation.*

Consideration of the landscape-scale context provides the opportunity to see project development in the context of the larger landscape it will occupy and



associated resource values it will affect; enhances the ability to evaluate cumulative effects of multiple projects; expands the capacity to avoid, minimize, and offset project impacts; and allows managers to make avoidance and compensatory mitigation site selection decisions that optimize for multiple resource values.

Generally speaking, advancing landscape-scale mitigation involves assessing existing and projected landscape conditions; establishing management goals and strategies for the landscape; incorporating those goals and strategies into plans and actions; identifying landscape-scale issues, threats, and impacts; tailoring strategies to address those threats or impacts; and developing and implementing monitoring and evaluation protocols and metrics in an adaptive framework.

2. Full Mitigation Hierarchy: *Utilize the full mitigation hierarchy in project planning and review.*

Agency officials, project developers, and other stakeholders will use landscape-scale strategies and plans to more effectively design projects that avoid potential conflicts with natural, cultural, and other valued resources and minimize impacts to those resources. Bureau protocols and guidelines will be established to inform, monitor, and report on these avoidance and minimization efforts. For projects that have unavoidable impacts, compensatory actions will be designed to address those impacts by protecting or restoring resources of similar function and value within the context of the landscape strategy. Such compensatory actions will be characterized by the principles described in this chapter.

3. Promote Certainty: *Establish protocols to simplify planning and project review while improving operational certainty for project proponents.*

Implementing landscape-scale mitigation approaches can increase agency efficiency by reducing the time, costs, and complexities associated with project reviews, environmental analysis, and permitting. However, Departmental bureaus should seek to establish additional practices and procedures that will improve operational certainty and reduce costs. Some important practices, such as advance determination of mitigation needs, providing scientific information and tools for assessing baselines and trends, and instituting cross-agency collaboration, are described below, while others will be specific to the development sector or resource under consideration.

To enhance certainty for compensatory mitigation, policies and plans should clarify up front: (1) the types of actions that will qualify as compensatory mitigation; (2) the manner in which mitigation obligations will be quantified; and (3) the consequences of mitigation failure or unexpected developments. There is no single correct approach to dealing with unexpected future circumstances that render mitigation efforts less effective

than anticipated. However, transparent and consistent approaches and expectations will foster a more adaptive and effective response to these uncertainties and reduce surprises for project proponents.

To further improve certainty, bureaus should take steps to ensure that mitigation commitments are implemented consistent with the specific mitigation outcomes identified in each project decision or resource management plan. For mitigation actions to be undertaken by a particular bureau, the bureau should commit to seek necessary funding. If impacts to resource values and functions cannot be adequately mitigated, the bureau may deny the proposed land-use authorization or project approval. In order to advance a transparent and consistent approach to mitigation, the Department will clearly identify in decision documents the commitments to mitigation measures designed to achieve environmentally-preferable outcomes.

4. Advance mitigation planning: *At the outset of the project planning process, incorporate mitigation and landscape objectives into the design and development of projects that are likely to impact natural or cultural resources.*

Ensuring consideration of the mitigation hierarchy and landscape strategies up-front in the project planning process can dramatically increase operational certainty and advance management objectives. For resource developers, identifying mitigation needs early in the project development process can provide greater predictability and certainty in the design, development and implementation of projects by avoiding the need for late project revisions and analyses, and by providing for coordination and consistency among agencies. This can serve to reduce project costs and increase the confidence of investors, purchasers, and other project beneficiaries in the ultimate success of the project.

In order to determine the mitigation requirements of a proposed development at the beginning of the planning process, bureaus should clearly state the management objectives and legal requirements for the affected landscape. This ensures that the project developer understands any potential conflicts with these objectives and the mitigation requirements for a proposed project. Providing clear descriptions of these management objectives requires that landscape-scale strategies, informed by landscape-scale scientific information and tools, be developed and made accessible for all of the involved partners. Strategies should use the best available science and be inclusive of, and incorporated into, any existing plans that describe the agency's intended use and management of a particular landscape, such as Bureau of Land Management (BLM) resource management plans, Fish and Wildlife Service (FWS) threatened and endangered species recovery plans, and National Park Service (NPS) park unit plans.

- 5. Science and Tools:** *Develop and utilize the scientific information and tools necessary to identify the most efficient and effective means of mitigating the effects of development and to inform monitoring and evaluation of mitigation efforts.*

The concept of mitigation begins with a detailed understanding of the resources that are impacted by development, which resource values need to be protected, the current baseline status of these resources, and other projected threats such as the impacts associated with climate change, invasive species, or changing fire regimes. This baseline information is necessary in order to develop landscape-scale strategies, compare mitigation scenarios, and assess the effectiveness of mitigation actions over time. Scientific data and tools are therefore needed to gain an understanding of the condition of existing resources, to identify where these resources are found and best conserved across broad geographies, and to understand how the resources respond to the impacts of development.

Science at the landscape-scale is also necessary to place mitigation decision-making in the context of changing environments, influences, and impacts that are beyond the local or project scale. Geospatial tools, now capable of optimizing for more than one species or resource value at a time, should be used to identify priorities for avoidance and compensation for these multiple resource values.

- 6. Foster Resilience:** *Identify and promote mitigation efforts that improve the resilience of our nation's resources in a rapidly changing climate.*

Climate change impacts and trends are an important consideration for conservation and development goals; this is increasingly true if development impacts or conservation goals have long time horizons. The Department's climate change adaptation policy, issued in December 2012, requires the Department and its bureaus to "use the best available science to increase understanding of climate change impacts, inform decision making, and coordinate an appropriate response to impacts on land, water, wildlife, cultural and tribal resources, and other assets." It also established the Department's policy to promote landscape-scale, ecosystem-based management approaches to enhance the resilience and sustainability of linked human and natural systems and consider climate change when developing or revising management plans, setting priorities for scientific research and assessments, and making major investment decisions.

The policy promotes several practices essential to mitigation decision making, including protecting diversity of habitat, communities and species; protecting and restoring core, un-fragmented

habitat areas and the key habitat linkages among them; anticipating and preparing for shifting wildlife movement patterns; maintaining key ecosystem services; monitoring and preventing the spread of invasive species; focusing development activities in ecologically disturbed areas when possible, and avoiding ecologically sensitive landscapes, culturally sensitive areas, and crucial wildlife corridors. Landscape-scale mitigation provides opportunities to build resilience by considering the cumulative effects of development, incorporating conservation principles such as habitat connectivity into landscape strategies, and ensuring that conservation and development activities take place within a comprehensive regional strategy.

- 7. Durability:** *Ensure that mitigation measures are durable.*

Mitigation must be durable to be effective. Mitigation is only durable if it is effective for the duration of the development's impacts on the affected resource values and functions. Durability also requires that resources protected or restored must remain "un-impacted" by subsequent development and minimally vulnerable to other stressors (e.g., fire, invasive species) for the duration of the impacts of the proposed development. Ensuring such durability requires the use of multiple approaches, particularly on public lands. For example, BLM is exploring potential new approaches, including easements, cooperative agreements, conservation rights of way, and withdrawals, for ensuring effective and durable mitigation actions.

- 8. Transparency:** *Promote transparency and consistency in the development of mitigation measures.*

Ensuring the transparency and predictability of mitigation decision-making begins by clarifying what management objectives are to be met by these decisions. The objectives may depend upon the nature of the resource being affected by a particular project and by the legal authority protecting that resource. For example, some resources are inherently unique and irreplaceable, so the option of offsetting their loss by creating or restoring them elsewhere is not possible. For other resources for which offsets are possible, the goal of mitigation can be expressed as maintaining or expanding a resource, value, or function, or it could seek to offset unavoidable impacts "to the maximum extent practicable," or to achieve through compensatory mitigation a "net conservation benefit." Still other formulations are possible. Thus, Departmental mitigation policies should clearly state the resource values and functions for which mitigation is being implemented, the mitigation objectives in terms of specific, measurable performance standards; and expected results consistent with existing authorities, policies, guidance, and instruction memoranda.

To serve this transparency principle and ensure consistency in mitigation actions, the Department and its bureaus will ensure that mitigation measures are demonstrably additional and durable when compensating for unavoidable impacts, and always reflect the guiding principles described in this report, including the need to monitor the results of mitigation actions. When monitoring indicates that mitigation outcomes have not been met, additional corrective measures must be undertaken. Such measures should be provided for through assurances established as part of the compensatory mitigation agreement.

- 9. Collaboration:** *Coordinate with other federal and state agencies, tribes, and stakeholders in conducting assessments of existing and projected resource conditions, forming mitigation strategies, and developing compensatory mitigation programs.*

For projects likely to impact multiple resources administered by different agencies, landscape-level mitigation can be used to bring these entities together early in the planning process to assemble the best available science and focus jointly on finding means to resolve any potential conflicts. In developing and implementing a landscape-scale approach to management, the Department will work with other federal and state agencies, tribes, scientific institutions, and stakeholders.

The networks of Landscape Conservation Cooperatives, Climate Science Centers, and other partnerships should be engaged to provide essential information in the development of landscape-level mitigation strategies across sectors, scales, and levels of government. For example, the Western Governors Association Wildlife Council's initiative on wildlife corridors and crucial habitats provides a regional data base that can support landscape-level project planning and mitigation. Tribes have off-reservation treaty and co-management rights that reflect long held traditions of cultural and spiritual site management and access concerns; the Department's special relationship with tribes requires special efforts to communicate and coordinate regarding these concerns.

- 10. Monitoring:** *Monitor and evaluate the results of mitigation over time to ensure that the intended outcomes are achieved.*

Mitigation can fail to fully meet expected outcomes if the mitigation actions are not properly designed and implemented, if the actions prescribed are not the right ones to address a specific project impact, or if unanticipated changes in resource conditions (e.g., wildfire or drought) occur. To remain adaptive and effective, mitigation strategies and plans must be adjusted over time to respond to changing conditions or unanticipated or inadequate outcomes to ensure that such efforts successfully achieve their intended



purpose.¹⁰ As part of the initial phases of project planning and in concert with project implementation, a monitoring strategy must be developed that permits accurate and transparent assessment of the current status of the resources of concern, how development has affected those resources, and progress in achieving the specific mitigation objectives for the resources and values impacted by the project.

Should monitoring reveal that mitigation objectives are not being achieved, or the outcomes of the mitigation are not producing the intended benefits, then changes in the mitigation strategy for current and future projects should be developed and adopted. A successful adaptive management process requires the establishment of management benchmarks to ensure progress toward mitigation goals, the establishment of protocols to monitor progress in relation to these benchmarks, and the resolve, fiscal resources, and ability to make adjustments as new information becomes available to ensure that mitigation objectives are ultimately achieved.

Landscape-Scale Mitigation Strategy: Implementation

To effectively integrate the guiding principles described above and enhance the ability of state and federal agencies to address wildland fire, invasive species, climate change and other large-scale stressors, the Department's management bureaus are implementing a landscape approach that involves four distinct steps: 1) identifying key landscape-scale attributes, and the

conditions, trends, and baselines that characterize these attributes; 2) developing landscape-scale goals and strategies; 3) developing efficient and effective compensatory mitigation programs for impacts that cannot be avoided or minimized; and 4) monitoring and evaluating progress and making adjustments, as necessary, to ensure that mitigation is effective despite changing conditions (Figure 1).

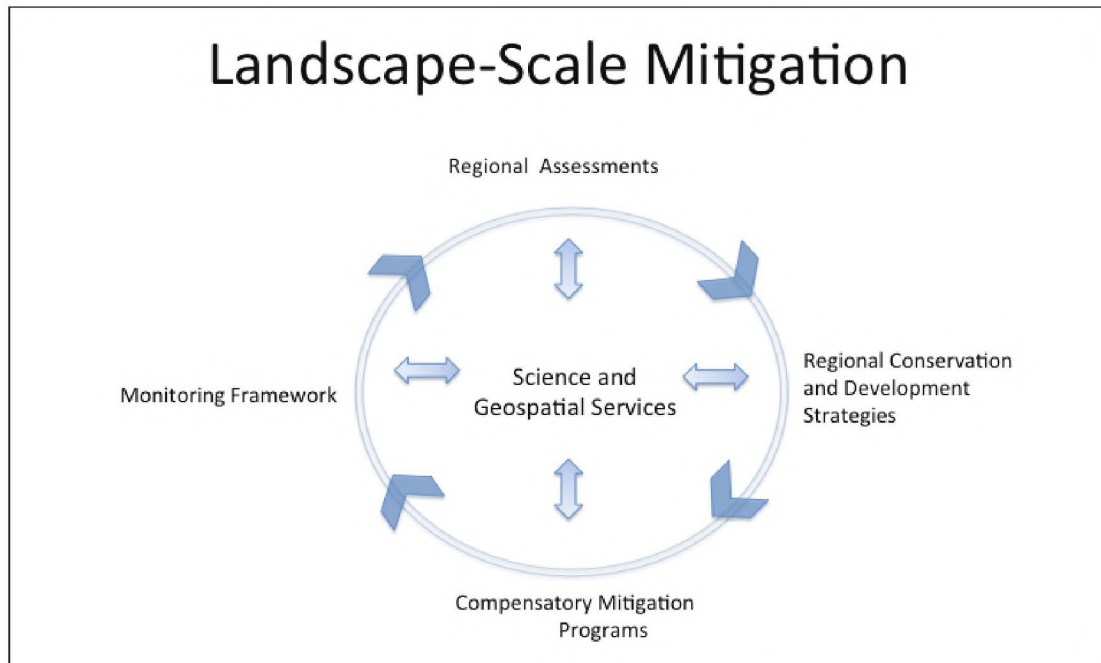


Figure 1. A Landscape Approach to Mitigation

Departmental bureaus are currently advancing a landscape approach to mitigation in various contexts in collaboration with multiple agencies and partners, and anticipate that these practices will evolve over time. To ensure consistent policies and practices and align the efforts of the bureaus to advance their respective missions, the bureaus will work together to advance a coherent landscape-scale strategy based on each of the four steps described above, and will do so in collaboration with other federal, state, and tribal agencies and non-governmental organizations, including industry. The outcomes for each of the steps are as follows:

1. **Geospatial Assessments:** Data and subject matter experts from the across the Department, collaborating with partners in other federal, state, and tribal agencies, will develop and maintain geospatial information systems for use in identifying existing and potential conservation priorities and development opportunities. These experts will develop tools and provide training to enable the appropriate scaling and use of these

geospatial data sources and maps. Much of this work has already been initiated; the United States Geological Survey (USGS) and other Departmental bureaus are developing science products and collaborating with state and non-governmental experts to help inform this landscape approach. These ongoing efforts include conducting research to help understand causal relationships and to identify potential thresholds, developing models to project future conditions, and providing remotely sensed imagery. Tools being developed by other federal agencies and several states will also inform this effort, including the Western Governors Association's Crucial Habitat Assessment Tool (CHAT) and State Wildlife Action Plans. Outcomes: a) A geospatial information system (or systems) that permits identification of existing and potential conservation priorities and development opportunities at the regional scale; and b) tools and the training necessary to promote their effective use in mitigation strategies. Next Step: Conduct a data and tools workshop and needs assessment, to be led by USGS in collaboration with other bureaus at the Department.

2. Landscape-level Strategies: Experts within the bureaus and offices of the Department will develop guidance for bureaus to employ in establishing landscape-scale goals and strategies. These goals and strategies will guide future resource planning and management decisions to advance a landscape level approach. This process will utilize the geospatial tools and data described above to help guide application of the mitigation hierarchy. Existing and planned policies will inform this effort, including the BLM Master Leasing Plans, BLM's Interim Regional Mitigation Policy, the Dry Lake Solar Energy Zone Regional Pilot Mitigation Strategy, and subsequent regional mitigation strategies. Ongoing efforts to mitigate for impacts to the greater sage-grouse will also inform this work. Strategies will be utilized in agency planning efforts, such as BLM's Resource Management Plans (when each plan is updated), and used to enhance project-specific NEPA processes. *Outcome:* Guidance for developing landscape-scale strategies that ensure the effective implementation of the mitigation hierarchy in planning major development activities, including energy and infrastructure, minerals, and water resources development. *Next Step:* Undertake a multi-bureau survey of existing and planned guidance related to mitigation strategies, to be led by BLM in collaboration with other bureaus at the Department.

3. Compensatory Mitigation Programs: Experts within the bureaus and offices of the Department will develop a template to inform future compensatory mitigation efforts. The purpose of this template will be to ensure that compensatory mitigation programs advance landscape-scale mitigation strategies; provide appropriate means for addressing the unavoidable impacts to resources associated with development; frame the management of compensatory mitigation funds; set standards for the certification of regional mitigation and/or conservation banks, and provide for periodic reporting on the effectiveness of completed mitigation actions. This work will build upon existing efforts across Departmental bureaus, other federal agencies, and states, and will incorporate best practices from ongoing programs, including compensatory mitigation programs for impacts to streams, wetlands, and endangered species. *Outcome:* A template for developing compensatory mitigation programs that achieve landscape level strategic goals and incorporate the guiding principles described in this report. *Next Step:* Prepare a multi-state comparison of existing compensatory mitigation programs and practices, led by FWS.

4. Monitoring and Evaluation: In consultation with their counterparts in federal, state, and tribal agencies, experts within the bureaus and offices

of the Department will develop a framework for monitoring and evaluating the effectiveness of specific mitigation actions or strategies. Utilizing the geospatial systems and data sources described above, this framework will build upon existing and evolving monitoring protocols and be integrated at a landscape scale. The framework will be used for projects, mitigation actions, and regional mitigation strategies or plans and will include the establishment of metrics and benchmarks that will help inform the application of the mitigation hierarchy over time, including periodic reviews of specific mitigation strategies. This framework will ultimately inform adaptive management strategies for achieving landscape-level management goals. *Outcome:* A monitoring and evaluation framework to measure the effectiveness of mitigation projects and actions, to measure progress toward the goals established by the landscape-level strategies, and to direct adjustments to these strategies when necessary to correct mitigation failures and adapt to changing conditions. *Next step:* Conduct a multi-agency review of existing landscape-scale programs for monitoring change in terrestrial condition, aquatic condition, and landscape pattern, to be led by Departmental bureaus working with the Interagency Land Management Adaptation Group.

Near-Term Policy Deliverables

The above outcomes will provide the foundation for developing a meaningful landscape-scale approach in the face of increasing pressures and accelerating change across American landscapes. In order to facilitate the four outcomes described above, incorporate the guiding principles into practice, and ensure the implementation and reporting that will be required, the Department will complete the following policy and process deliverables while examining additional measures that would advance the landscape-scale mitigation strategy:

1. **Department Manual Mitigation Chapter – Q3 2014.** The Office of Policy Analysis will develop guidance, in the form of a new chapter to the Department Manual, for implementing, Department-wide, the principles and procedures outlined in this strategy.
2. **Interagency Coordination –** The Department will work with the Steering Committee on Infrastructure Permitting and related working groups to execute the Implementation Plan for the Presidential Memorandum on Modernizing Infrastructure Permitting, including its provision to "Expand Innovative Mitigation Approaches."
3. **Develop Mitigation Framework for Greater Sage-Grouse Conservation – Complete Q4 2014.** The Department, with leadership from the BLM, USGS, and the FWS, will develop a landscape-scale mitigation framework for greater sage-

grouse conservation in collaboration with states, tribes, and local governments, as well as industry and other stakeholders.

4. **Initiate Guidance for Mitigation in National Environmental Policy Act Analysis** – Q3 2014. The Office of Environmental Policy and Compliance will convene a working group of Department NEPA specialists to develop Departmental guidance based on the Council on Environmental Quality's 2011 guidance on the "Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact." This guidance will reflect CEQ guidance on integrating compliance with NEPA and section 106 of NHPA.
5. **Develop Geospatial Data Tools for Landscape-scale mitigation** – Q4 2014. The Department, with leadership from the Geospatial Information Officer and the USGS, will convene a workshop of partners and experts to identify and evaluate existing landscape analysis data and tools and issue guidance for their use in mitigation decision support as described in section 4.2 above.
6. **Develop Technical Reference for Solar Energy Zone Regional Mitigation.** The BLM will conduct a stakeholder workshop to discuss the lessons learned from the Dry Lake SEZ Regional Mitigation Pilot Strategy and develop a technical reference document for developing future regional mitigation strategies for solar development. Lessons learned from the Dry Lake pilot effort, as well as public feedback on the strategy, will inform the development of mitigation strategies for additional SEZs.
7. **Finalize BLM Regional Mitigation Policy** – Q3 2014. The BLM will finalize its "Interim Draft Regional Mitigation Manual Section 1794" in accordance with this strategy. This policy will include a commitment to avoid, minimize, and compensate for residual impacts to appropriate resources, including conservation areas within and outside the jurisdiction of the bureau in collaboration with relevant land managers such as NPS, FWS, USFS, and state resource management agencies.
8. **Initiate Development of Handbook for Implementing Regional Mitigation Policy** – Q1 2015. The BLM will initiate development of a handbook for implementing its Regional Mitigation Policy and will work to incorporate mitigation principles into relevant programmatic handbooks and manuals. The BLM will also develop training modules for field staff.
9. **Develop and Implement Regional Workshops and Training for Implementation of Landscape-Level Mitigation** – Q1 2015 and ongoing. An interagency team will conduct regional workshops on implementation of the policies, programs, and guidance for landscape-level mitigation described in this strategy. Training and resources will address lessons learned and best management practices, and may include non-agency stakeholders. USGS, in collaboration with other bureaus within the Department, will provide training, technical assistance, and tool development for incorporating best available science, design of monitoring frameworks, adaptive management, and use of Structured Decision Making for evaluating mitigation alternatives.
10. **Policy Forum on Landscape-Scale Analysis** – Q4 2014. In conjunction with other bureaus within the Department and the U.S. Forest Service, the BLM will convene a policy forum of federal scientists and policy experts, working with state authorities and other key stakeholders, to share methods for identifying potential landscape-scale conservation and development priorities and to discuss how those methods may be better integrated into BLM Resource Management Plans and U.S. Forest Service Forest Plans.
11. **Propose Revisions to FWS Mitigation Policy** – Q4 2014. The FWS will formally propose revisions to its 1981 Mitigation Policy consistent with the principles outlined in this strategy.
12. **Propose Revisions to FWS Mitigation Banking Policy** – Q4 2014. The FWS will formally propose revisions to its 2003 "Guidance for the Establishment, Use, and Operation of Conservation Banks" consistent with the principles outlined in this strategy.
13. **Propose FWS Policy on Mitigation for Candidate Species** – Q2 2014. The FWS will formally propose new policy regarding mitigation for established "candidate species" that ensures the validity of those commitments should the species be listed under the ESA.
14. **Initiate Guidance for Landscape Scale Mitigation Under Section 106 of NHPA** – Q1 2015. The NPS will convene a workgroup of experts from DOI land managing bureaus, the Advisory Council on Historic Preservation, and other stakeholders to develop guidance for landscape-scale mitigation of impacts to cultural resources under Section 106 of the NHPA.
15. **Initiate Guidance for Landscape Level Mitigation for Shared Scenic Resources and Values** – Q1 2015. The NPS will convene a workgroup of experts from Departmental land managing bureaus and other stakeholders to collaboratively develop guidance for addressing landscape-level mitigation for preserving shared scenic views.

Signs of Progress

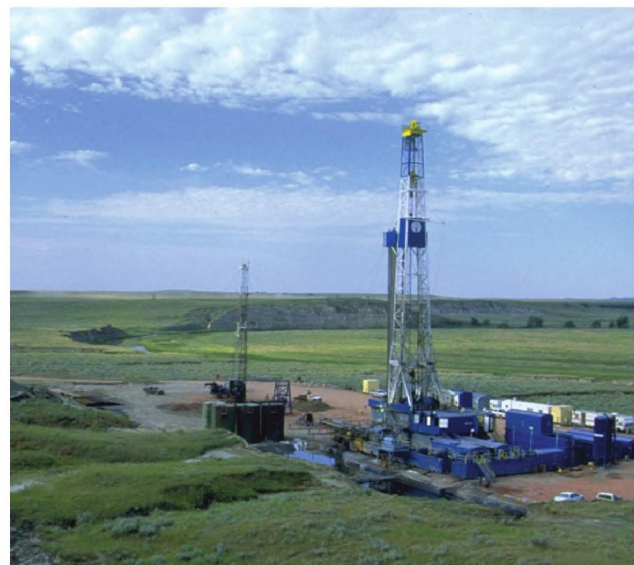
The preceding strategy provides a blueprint for improving the effectiveness of the Department's mitigation policies and practices. In developing this proposed strategy, the authors reviewed many efforts, tools, and initiatives already ongoing or planned at the state and federal level that will inform the implementation of these reforms. The following sampling of efforts provides both proof-of-concept and a hopeful sign that many of the principles described above are already embedded in initiatives at all levels of government. Our challenge now is to build from these endeavors to construct a consistent and effective set of policies for the Department of the Interior and nationwide.

- **The Maryland Water Resources Registry (WRR)** is a collaborative effort by multiple federal and state agencies to streamline permitting processes while simultaneously enhancing ecological outcomes. The stated objective of the WRR is to "map natural resource areas that are a priority for preservation" and to "identify sites best-suited for ecosystem preservation and restoration". The WRR interagency team worked in partnership to 1) Integrate agency conservation priorities associated with the Clean Water Act; 2) Develop criteria for prioritizing areas suitable for conservation and restoration; and 3) Publish a web site where mitigation "opportunities" can be explored via a Geographic Information System. Published mitigation opportunities include the protection or restoration of wetlands, uplands, streamside areas, and storm water infrastructure areas. The interactive-mapping tool uses a scoring system to rate mitigation opportunities with the goal of attracting developers towards mitigation opportunities with the highest ecological value. The benefits of the WRR include the following:
 - *Permit applicants can easily identify priority mitigation opportunities during the planning phase, before the review process is initiated.*
 - *Private developers can guide their land use and mitigation decisions based on multi-agency priorities.*
 - *Public land trusts and wetland bankers can target areas for purchase and preservation.*
 - *Local and County planners can inform resource protection, zoning, and land use plans. Registry Web site: <http://www.watershedresourcesregistry.com>.*
- **Advance Permitting for Bridge Modernization in Oregon.** In 2003 the Oregon State Legislature enacted the third Oregon Transportation Investment Act (OTIA III), an infrastructure and economic stimulus law that established a State Bridge Delivery Program requiring advance permitting and environmental mitigation planning prior to design and build. In 2008

the Oregon Department of Transportation conducted a cost/benefit comparison of a traditional project permitting approach with the programmatic process developed for the OTIA III State Bridge Delivery Program. The analysis noted that "the expected need for mitigation as a result of bridge construction has been a fraction of what was anticipated at the beginning of the program due to the avoidance of resources during the development process..." While \$54 million in savings was projected, the realized savings exceeded \$73 million in 2008.

In addition to cost avoidance and a substantial reduction in delays, the qualitative benefits of the programmatic approach versus the project-by-project approach were also described in the analysis as substantial, including increased trust and improved flexibility in resolving issues. "The economies of scale realized by addressing regulatory obligations at a program level have taken negotiations on mitigation and enhancement opportunities off of the critical path for individual projects. This has led to decreased construction schedules and better environmental outcomes."¹¹

- **North Carolina Ecosystem Enhancement Program.** North Carolina's Ecosystem Enhancement Program (EEP), a State-backed in-lieu fee program that provides offsite compensatory wetland and stream mitigation offsets, has allowed the state's Department of Transportation (NCDOT) to integrate their transportation planning with landscape-level watershed planning in order to streamline the overall mitigation process. In doing so, the EEP has reduced wetland mitigation expenses, as a percent of NCDOT project costs, from 8 percent to less than 3 percent, representing an annual cost savings of \$32.5 to \$65.0 million.¹² The North Carolina Department of



Environment and Natural Resources reports that, since 2003, the EEP has allowed the NCDOT to advance nearly \$14 billion in transportation projects without a single delay due to mitigation permitting (from: <http://portal.ncdenr.org/web/eeep/why-eeep-matters>).

- **The Western Governors' Crucial Habitat Assessment Tool (CHAT).** The CHAT is a cooperative effort of 16 Western states to provide the public and industry a high-level overview of "crucial habitat" across the West. As defined by the Western Governors Association (WGA), crucial habitats are areas that are "likely to provide the natural resources important to aquatic and terrestrial wildlife, including species of concern, as well as hunting and fishing species." The CHAT, built from state wildlife agency data, is intended to help project proponents during pre-planning of development or in comparing wildlife habitat areas. The tool is designed to help developers reduce costs, conflicts and surprises while ensuring wildlife values are better incorporated into land use decision-making. The online tool is an example of WGA's collaboration with federal agencies – including the FWS, the BLM, and the U.S. Forest Service – to enable state fish and wildlife data and analyses to inform land use, planning and other land use decisions. "The Western Governors encourage widespread use of CHATs to better inform energy, transportation, and land use planning while providing for healthy and productive landscapes." (from: http://www.westgov.org/policies/cat_view/95-reports/280-2013?orderby=dmdatecounter&ascdesc=DESC).
- **Dry Lake Solar Energy Zone.** In conjunction with the Western Solar Energy Plan, the BLM developed a pilot mitigation strategy for solar energy projects that may occur in the Dry Lake Solar Energy Zone. The Solar Energy Plan calls for the development of mitigation strategies for each solar energy zone (SEZ) to identify opportunities for compensatory mitigation to offset the impacts of projects on resource values in the SEZ. Through the development of these mitigation strategies, project proponents will have a better understanding of the mitigation measures required, and the associated costs, for compensatory mitigation actions in conjunction with development in the particular SEZ. Lessons learned from the Solar Regional Mitigation Strategy for the Dry Lake Solar Energy Zone will be used to inform the development of future mitigation strategies for other solar energy zones.
- **Multi-State Habitat Conservation Plans.** Habitat conservation plans (HCPs) under the Endangered Species Act have been used both to offset the impacts of single-landowner development projects

and to integrate endangered species conservation considerations into local land-use ordinances. Increasingly, habitat conservation plans are being used to address activities occurring in multiple states. A recent example is the plan approved for NiSource, Inc., a natural gas pipeline and distribution company. This HCP mitigates the impacts of pipeline construction and maintenance activities on dozens of endangered species in fourteen states. Similar multi-state HCPs are under development for wind energy projects within the migratory corridor of the whooping crane and within the range of the endangered Indiana bat.

- **Desert Renewable Energy Conservation Plan.** The Desert Renewable Energy Conservation Plan (DRECP) is a comprehensive and coordinated state/federal effort to provide effective protection and conservation of California's desert ecosystems while guiding the development of appropriate renewable energy projects throughout the region (over 22,585,000 acres).

Goals and objectives for the DRECP: Provide for the long-term conservation and management of Covered Species*; preserve, restore, and enhance natural communities and ecosystems; identify and avoid impacts to sensitive cultural resources; build on the Competitive Renewable Energy Zones identified by previous studies; further identify the most appropriate locations for utility-scale renewable energy projects; provide a framework for a more efficient process for regulatory authorization resulting in greater conservation than project-by-project or species-by-species reviews can obtain; provide durable and reliable regulatory assurances; identify and incorporate climate change adaptation research, management objectives, and/or policies into the final plan document.

- **Advance Mitigation for Greater Sage-Grouse and Lesser Prairie-Chicken**

Greater Sage-Grouse

In conjunction with the development of a conservation strategy for the greater sage-grouse, federal and state land management agencies are developing guidance for measures to mitigate the effects of development activities that may pose a threat to the continued existence of the species. This strategy will apply to all management actions on BLM, Forest Service, and state lands within the remaining range of the species while providing each state the flexibility to develop tools (e.g., mitigation banks, fee structures) to meet the desired mitigation outcomes.

* Proposed Covered Species are plants and animals identified in the Plan for which conservation and management are provided and "take" will be authorized over a long-term permit period. The Covered Species list is developed through an iterative planning process incorporating input from the public stakeholders, and independent scientific review.

Lesser Prairie-Chicken

The five states with lesser prairie-chickens (CO, KS, NM, OK, and TX) have developed a rangewide conservation plan that relies heavily on a mitigation program in which agricultural landowners will be paid to undertake conservation measures on their lands. Funds for these payments will come from assessments on oil and gas and other development activities. Under the special 4(d) rule proposed by the FWS, development activities that result in the taking of lesser prairie-chickens will be authorized, provided that those development activities are covered by the mitigation program. Thus, even though the lesser prairie-chicken is a federally listed threatened species, the state-developed rangewide conservation plan and its mitigation program will effectively leave the states with the authority to continue to manage and conserve the species.

- **Offshore Wind Energy.** In 2010, the Department's Bureau of Ocean Energy Management (BOEM) launched an offshore 'Smart from the Start' program designed to facilitate efficient and environmentally responsible siting, leasing and construction of new offshore wind energy projects on the Atlantic Outer Continental Shelf (OCS). The Initiative calls for BOEM, in close coordination with local, state and Federal partners, to identify priority wind energy areas for potential development and accelerate the leasing process for those areas. BOEM has convened 10 intergovernmental state Task Forces engaged in planning for Atlantic OCS wind leasing and development, and has also launched Task Forces in Oregon and Hawaii. The Task Forces are central to planning and designing wind energy areas that provide opportunities for significant wind energy generation while minimizing and managing potential conflicts with environmental concerns and important other uses, such as fishing, shipping, tourism, National Seashores, and Native American and cultural interests.

BOEM uses the best available science and a stakeholder-driven process to identify resources, conflict-use areas and suitable placement of offshore energy facilities. Through the Task Forces and the environmental review process, BOEM will identify necessary mitigation needs for potential environmental risks early in the process. Mitigation may include avoiding archaeological resources, reduced vessel traffic, avoiding high value fishing grounds, requiring minimum separation distances for marine mammals, preserving important ocean views, or adjusting the locations of meteorological towers and buoys to avoid adverse effects to offshore cultural resources or biologically sensitive habitats.

- **Rapid Ecoregional Assessments.** The BLM's Rapid Ecoregional Assessments (REA) Program was initiated in 2010. REAs are peer-reviewed science products that synthesize existing information (including a significant

amount of non-BLM data) about resource conditions and trends. They highlight and map areas of high ecological value; gauge potential risks from stressors including climate change; and establish landscape-scale baseline ecological data to gauge the effect and effectiveness of future management actions. It is the policy of the BLM to use this REA information and similar information from other large-scale assessments to help identify potential development and conservation priorities; prepare land use plans and plan amendments; conduct cumulative impact analyses; develop best management practices; and authorize public land uses. Like the Western Governors Association's Crucial Habitat Assessment Tool, the REAs are foundational to a landscape approach to management. The BLM released four Rapid Ecoregional Assessments (REAs) in 2013 and is planning to release four additional REAs in 2014, six in 2015, and one in 2016. Taken together, these 15 REAs cover over 700 million acres of public and non-public lands.

- **Transportation Infrastructure.** With the understanding that existing mitigation efforts do not always provide the greatest environmental benefits or promote ecosystem sustainability, the U.S. Department of Transportation and a team of representatives from eight other federal agencies and Departments of Transportation from four states developed guidance for making transportation infrastructure development more sensitive to wildlife and ecosystems through enhanced interagency and stakeholder collaboration. This effort culminated in the 2006 report *Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects*. In 2012, the State of California adopted a draft framework for Regional Advanced Mitigation Planning (RAMP) that embraced the principles from *Eco-Logical* but also established guidelines for streamlining permitting processes as well as improving conservation outcomes – essentially integrating infrastructure and conservation planning. This approach has been endorsed by the California Departments of Transportation, Water Resources, and Fish and Game, as well as the California Wildlife Conservation Board, the California State Water Resources Board, the U.S. EPA, National Marine Fisheries Service, and the U.S. Department of Transportation.

The initiatives and programs described above are only a few of the many programs now being developed at state and federal levels to address the need to better integrate development and conservation planning at the landscape scale on both public and private lands and waters. To varying degrees they all address the guiding principles from Chapter 4 and seek to improve mitigation efficiencies and effectiveness, provide more transparency and predictability, and foster more resilient human and natural systems in the face of a changing climate.

This report describes an advanced form of collaborative problem-solving at a time when the uncertainties of a rapidly changing climate and the imperative of an energy transformation pose challenges for sustaining the natural ecosystems that buffer us from extreme weather events and play a fundamental role in the maintenance of America's clean air, clean water, agricultural productivity, world class recreational opportunities, and economy.

The list of promising efforts described in the previous chapter demonstrates that there is a widely shared understanding of the need to work collaboratively to advance landscape-scale approaches. It also demonstrates that there are as many variations on the approach as there are management needs. To advance the multiple missions of the Department and its bureaus, these approaches must be aligned as much as possible across bureaus, agencies, states, and partners.

The strategy described in this report is intended to establish a common approach that will evolve and adapt to changing needs but ensure consistent policies and practices Department-wide. Getting it right on mitigation will improve our Nation's ability to more effectively balance the Department's responsibilities for managing development and conserving America's incomparable natural and cultural resources. This report, and the strategy it describes, is the Department's first step in building upon the innovative efforts that have been emerging across the country to avert resource conflicts prior to development and to advance sustainable solutions that ensure the highest and best use of our natural resources.



References

- ¹ Under NHPA, federal agencies are required to consider the effects of their “undertakings” on historic properties; regulations require that the federal agency consult States, Tribes, and the public to identify historic properties, assess, and resolve adverse effects (if any).
- ² The Wild and Scenic Rivers Act requires the avoidance of adverse impacts to river values.).
- ³ Compensatory mitigation is not a concept explicitly expressed under the NHPA, but in practice it does sometimes occur. For example, an activity that adversely affects some properties in a historic district might be mitigated through creation of a dedicated funding source to care for the remaining properties. In general, however, due the uniqueness of cultural and historic resources, avoidance and minimization are usually essential to the successful conservation of these resources. Similarly, avoidance of impacts to parks, wilderness areas, and conservation system lands from nearby development will best ensure the integrity of these areas and avoid the need for compensatory mitigation of uncertain efficacy.
- ⁴ World Bank. 2007. Global economic prospects 2007: Managing the next wave of globalization. Washington, DC: World Bank.
- ⁵ Clement, J.P., J.L. Bengtson, and B.P. Kelly. 2013. Managing for the Future in a Rapidly Changing Arctic. A Report to the President. Interagency Working Group on Coordination of Domestic Energy Development and Permitting in Alaska (D.J. Hayes, Chair), Washington, D.C.
- ⁶ David J. Hayes, “Addressing the Environmental Impacts of Large Infrastructure Projects: Making ‘Mitigation’ Matter,” 44 Environmental Law Reporter 10016 (Jan. 2014).
- ⁷ Birnie, Katherine (Ecosystem Investment Partners). May 9, 2013. “State of the Market: National Market Analysis and Overview.” Presentation at 2013 National Mitigation & Ecosystem Banking Conference. New Orleans, LA.
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- ⁹ Kiesecker, Joseph M., Holly E. Copeland, Bruce A. McKenney, Amy Pocerwicz, and Kevin E. Doherty. 2011. Energy by Design: Making Mitigation Work for Conservation and Development. Chapter 9 in: David E. Naugle (Ed.), Energy Development and Wildlife Conservation in Western North America. pp. 159-181.
- ¹⁰ Williams, B.K., and E.D. Brown. 2012. Adaptive Management: The U.S. Department of the Interior Applications Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.
- ¹¹ Oregon Department of Transportation. October 2008. “OTIA III State Bridge Delivery Program: Environmental Programmatic Permitting Benefit/Cost Analysis.
- ¹² Anderson, M. 2005. “Enhancing wetlands and watersheds using wetland banking, land trusts, and preservation within transportation mitigation: An analysis of the North Carolina Ecosystem Enhancement Program.” Trust for Public Lands.

Selected Major Authorities, Regulations, and Guidance Addressing Mitigation

This strategy is supported by a variety of authorities, regulations, and guidance including, but not limited to:

National Environmental Policy Act (NEPA) - 42 U.S.C. § 4371 et seq. NEPA aims to integrate environmental values into decision making by requiring agencies to analyze the environmental impacts of proposed actions that may significantly impact the environment. 42 U.S.C. § 4332(2)(C). Council on Environmental Quality and Department of the Interior regulations implementing NEPA recognize the potential for mitigation to ameliorate impacts of a proposal and require agencies to include in their analyses appropriate mitigation measures not already included in the proposed action or alternatives. 40 C.F.R. §§ 1502.14(f), 1502.16(h); 43 C.F.R. § 46.130. Mitigation is defined broadly, to include means by which impacts can be avoided, minimized, rectified, and reduced, as well as means for compensating for impacts through replacement of resources. 40 C.F.R. § 1508.20. The regulations further require that agency decisions must “[s]tate whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not.” 40 C.F.R. § 1505.2(c). CEQ guidance recognizes the importance of mitigation, including the use of mitigation to ensure that impacts of a proposed action will not be significant, along with monitoring and other mechanisms for ensuring that mitigation is implemented, thus enabling agencies to reach a Finding of No Significant Impact (i.e., a “mitigated FONSI”). Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact (January 14, 2011).

Federal Land Policy and Management Act (FLPMA) - 43 U.S.C. § 1701 et seq. FLPMA requires that the public lands be managed “on the basis of multiple use and sustained yield,” 43 U.S.C. § 1701(a)(7), and “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values....” 43 U.S.C. § 1701(a)(8). Under the broad discretion afforded by FLPMA, the BLM can condition uses of the public lands authorized through various instruments (e.g., rights-of-way, permits, licenses, easements, etc.) on the implementation of mitigation measures intended to reduce impacts. The BLM’s recently issued draft mitigation policy provides policy, procedures, and instructions for developing strategies that identify and facilitate regional mitigation strategies, using BLM’s land use planning process to identify potential mitigation sites and measures, and identifying and implementing appropriate mitigation within or outside of the area of impact for particular land-use authorizations. Interim Draft Policy on Regional Mitigation; Manual Section 1794 (June 13, 2013).

Mineral Leasing Act (MLA) - 30 U.S.C. § 181 et seq. The MLA governs leasing of several minerals, most notably oil and gas. The BLM is required, at a minimum, to hold quarterly auctions of oil and gas leases in each state, 30 U.S.C. 226(b)(1). Leases are issued for 10 year terms and may be extended for as long as they produce oil or gas in paying quantities, and include stipulations for reducing impacts of development, *Id.*, 226(e); 43 C.F.R. 3101.1-3. Prior to drilling, operators must file an application for a permit to drill (APD) that, when issued, can require additional measures for mitigating anticipated impacts of development, 30 U.S.C. 226(f),(g).

National Landscape Conservation System (NLCS, Organic Act) - 16 U.S.C. § 7201 et seq. The NLCS was established “in order to conserve, protect, and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations” and that “The Secretary shall manage the system...in a manner that protects the values for which the components of the system were designated.” Under this direction, the BLM has implemented policy to require mitigation of impacts in order to protect the objects and values for which the units of the NLCS were designated. For example, BLM Manual Section 6100 § 1.6.A.3 describes how “valid existing rights and other non-discretionary uses occurring within NLCS units will be managed to mitigate associated impacts to the values for which these lands were designated”. Similarly, BLM Manual Section 6220 § 1.6.E.5.b describes how “the effects of projects from the grants of the (rights-of-way) must be mitigated” for National Monuments and National Conservation Areas. Additionally, BLM Manual Section 6100 § 1.6.C.5 identifies how NLCS units provide good locations for compensatory mitigation projects.

Endangered Species Act of 1973 (ESA) - 16 U.S.C. § 1531 et seq. Under sections 7 and 10 of the ESA, the FWS may recommend means to avoid and minimize the take of listed wildlife species, as well as to establish targeted habitat. Under section 7, Federal agencies must consult with FWS or National Marine Fisheries Service to ensure that agency actions are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify designated critical habitat. The biological opinion issued by FWS or NMFS includes an incidental take statement, if appropriate, and provides reasonable and prudent measures that must be implemented to minimize the impacts of any anticipated take of listed wildlife species. Where a jeopardy or adverse modification opinion is rendered, reasonable and prudent alternatives will be recommended. Landowners who wish to develop private lands inhabited by listed wildlife species may receive an incidental take permit from FWS under Section

10, provided they have developed an approved habitat conservation plan (HCP), which sets out steps that the permit holder will take to avoid, minimize, and mitigate the impacts on species likely to occur from the proposed action. Off-site mitigation banks often play a key role in meeting conservation requirements under an HCP. Candidate Conservation Agreements, also under section 10, are voluntary agreements where landowners agree to carry out measures to assist in the conservation of candidate and other at-risk species.

The FWS issued a mitigation policy in 1981 to help the agency make consistent and effective mitigation recommendations to protect and conserve the most important and valuable fish and wildlife resources, while facilitating balanced development of the Nation's natural resources; U.S. Fish and Wildlife Service Mitigation Policy (46 FR 7644-7663, 1981). FWS has also issued guidance to help the agency evaluate proposals for establishing conservation banks for the purpose of off-setting adverse impacts to listed species. Guidance for the Establishment, Use, and Operation of Conservation Banks (May 2, 2003). More recently, FWS issued draft guidance that describes a crediting framework for Federal agencies in carrying out recovery of threatened and endangered species. Under the draft guidance, Federal agencies could show how adverse effects of agency activities to a listed species are offset by beneficial actions taken elsewhere for that species, so long as there is a net conservation benefit to the species. Draft Guidance on Recovery Crediting for the Conservation of Threatened and Endangered Species; 72 Federal Register 62258 (November 2, 2007).

Fish and Wildlife Coordination Act (FWCA) - 16 USC § 661-667e. The FWCA establishes fish and wildlife conservation as a coequal objective of all federally-funded, permitted, or licensed water-related development projects. Under the FWCA, Federal agencies developing such projects must consult with FWS (and NMFS in some instances) and the states regarding fish and wildlife impacts. The statute provides FWS with authority to investigate and prepare reports providing mitigation analyses on all water-related development projects; FWS mitigation recommendations may include measures addressing a broad set of habitats beyond the aquatic impacts triggering the FWCA and species beyond those covered by other resource laws.

National Historic Preservation Act (NHPA) - 16 U.S.C. § 470 et seq. The NHPA is a procedural statute that requires Federal agencies under Section 106 to take into account the effects of their undertakings on historic properties, and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on these undertakings. For the purposes

of NHPA, historic properties include properties that are listed in or eligible for listing in the National Register of Historic Places. Through the implementing regulations of Section 106, which are contained in 36 CFR Part 800, "Protection of Historic Properties," federal agencies are required to consult with State/Tribal Historic Preservation Officers, Indian tribes or Native Hawaiian Organizations, local governments, interested parties such as historic preservation advocacy organizations, the public, and the ACHP. Consultation includes assessing whether or not the undertaking will have adverse effects on such properties and measures to resolve those adverse effects. Section 110(f) specifically addresses mitigation of adverse effects to properties of national significance, requiring that "prior to the approval of any Federal undertaking which may directly and indirectly affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark." In many instances, the Section 106 consultation process will result in the execution of a memorandum of agreement, see 36 C.F.R. § 800.6(c), which may include federal agency commitments to avoid or mitigate any adverse effects.

Clean Water Act - 33 U.S.C. § 1251 et seq. Section 404 of the Clean Water Act provides extensive authority to the U.S. Army Corps of Engineers and the Environmental Protection Agency to conduct mitigation where federal actions impact waters of the United States. The FWS has specific authority under section 404(m) to secure mitigation for impacts to aquatic resources nationwide. Section 404 (m) requires the Secretary of the Army to notify the Secretary of the Interior, through the FWS Director, when a permit application has been received or when the Secretary proposes to issue a general permit, and FWS can submit written comments within 90 days. Through its comments, FWS can assist the Corps of Engineers in developing permit terms that avoid, minimize or compensate for permitted impacts. Through its policy on compensatory mitigation related to the National Wildlife Refuge System, FWS has established guidelines for using Refuge lands for siting compensatory mitigation for impacts permitted through section 404 or section 10 of the Rivers and Harbors Act. Final Policy on the National Wildlife Refuge System and Compensatory Mitigation under the Section 10/404 Program (64 FR 49229-49234, 1999).

Clean Air Act - §7401, et seq. The Clean Air Act calls for the prevention and control of air pollution across the country and includes a national goal to "to preserve, protect and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic or historic value" (42 U.S.C. §7470(2)). It sets forth an affirmative duty to protect air quality and air quality related values (e.g., visibility and

ecosystem resources) of national parks and wilderness areas designated as Class I areas under the statute by avoiding and minimizing impacts to such areas. The Clean Air Act also provides for the banking and trading of emissions reductions and use of emission offsets to capture cost efficiencies. The NPS, BLM, FWS, US Forest Service and the EPA have entered into a memorandum of understanding that adopts a standardized approach that facilitates the completion of NEPA environmental analyses for federal land use planning and oil and gas development decisions and leads to improved design and implementation of mitigation measures that will both protect air quality and air quality related values and provide opportunities for future oil and gas development.

NPS Organic Act of 1916 and General Authorities

Act of 1970, as amended - 16 U.S.C. §1, et seq. Under the Organic Act, the National Park Service (NPS) in the Department of the Interior is charged with managing the units of the National Park System so as to “conserve the scenery and the national and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. Through the General Authorities Act as amended, Congress directed that “the authorization of activities shall be construed and the protection, management and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as many have been or shall be directly and specifically provided by Congress.” These authorities, among others, provide a framework for the Secretary of the Interior to be proactive in protecting the resources and values of the National Park System and for bureaus within the Department to mitigate the impacts of their discretionary activities on the resources and values of park units.

Paleontological Resources Preservation Act (PRPA) -

16 U.S.C. § 470 aaa et seq. This statute states that federal agencies “shall manage and protect paleontological resources on Federal land using scientific principles and expertise.” In areas determined to have high or undetermined potential for significant paleontological resources, the agency must implement an adequate program for mitigating the impact of development, including surveys, monitoring, salvage, identification and reporting, and other activities required by law.

White House Guidance and Initiatives

Executive Order (EO) 13604 on Improving Performance of Federal Permitting and Review of Infrastructure Projects (March 28, 2012).

The EO calls for more timely and efficient Federal permitting and review of infrastructure projects while improving environmental

and community outcomes. To achieve that objective, the order calls on agencies to integrate reforms into project planning processes “so that projects are designed appropriately to avoid, to the extent practicable, adverse impacts on public health, security, historic properties and other cultural resources, and the environment, and to minimize or mitigation impacts that may occur.”

A Federal Plan for Modernizing the Federal Permitting and Review Process for Better Projects, Improved Environmental and Community Outcomes, and Quicker Decisions (June 2012).

The Plan calls on Federal agencies to identify opportunities to improve mitigation processes by integrating intra- and inter-agency processes and encouraging mitigation planning at the regional, watershed and landscape levels, and to move away from addressing mitigation at the end of project development and on a project-by-project basis.

Presidential Memorandum on Modernizing Federal Infrastructure Review and Permitting Regulations, Policies, and Procedures (May 17, 2013).

The Memorandum recognizes landscape- and watershed-level mitigation practices as means by which agencies have achieved better outcomes for communities and the environment and realized substantial time savings in review and permitting. The Memorandum directs an interagency leadership team to, among other things, expand the use of IT tools to facilitate monitoring of mitigation commitments and “identify improvements to mitigation policies to provide project developers with added predictability, facilitate landscape-scale mitigation based on conservation plans and regional environmental assessments, facilitate interagency mitigation plans where appropriate, ensure accountability and the long-term effectiveness of mitigation activities, and utilize innovative mechanisms where appropriate.”

Implementation Plan for the Presidential Memorandum on Modernizing Infrastructure Permitting (March 2014).

The Plan includes actions to identify policy changes to promote in-advance, landscape-scale mitigation; to facilitate high-quality and efficient permitting and review processes; to identify best practices for early engagement with tribal, state, and local governments; and to expand innovative mitigation approaches that facilitate landscape-level mitigation planning, consistent and transparent standards for applying the mitigation hierarchy, and use of in-lieu fee program and mitigation banks. The overall goal of the plan is to “modernize the Federal permitting and review process for major infrastructure projects to reduce uncertainty for project applicants, reduce the aggregate time it takes to conduct reviews and make permitting decisions by half, and produce measurably better environmental and community outcomes.”

Appendix II

Subsequent to the Secretarial Order and during the preparation of this report, the Climate and Energy Task Force communicated with many federal, state, and private partners and stakeholders. This outreach process is ongoing and will continue to inform the development and implementation of the Department's mitigation policies as this strategy takes shape. The following entities are representative of the many partners contacted:

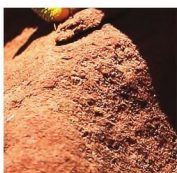
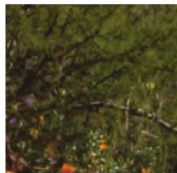
- U.S. Department of Agriculture
- U.S. Department of Transportation
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- White House Office of Management and Budget
- Federal Energy Regulatory Commission
- Advisory Council on Historic Preservation
- State of California, Office of the Governor
- State of Maryland
- Western Governors Association
- Solar Energy Industries Association
- American Wind Energy Association
- National Mitigation Bankers Association
- The Nature Conservancy
- The Wilderness Society
- Defenders of Wildlife
- The Conservation Fund
- Natural Resources Defense Council
- Theodore Roosevelt Conservation Partnership
- Southern Nevada Water Authority
- Noble Energy
- Ultra Petroleum
- Newfield Exploration Company
- Bill Barrett Corporation
- Beatty and Wozniak, P.C.



Key To Acronyms

BLM	Bureau of Land Management	NEPA	National Environmental Policy Act
BOEM	Bureau of Ocean Energy Management	NHPA	National Historic Preservation Act
CHAT	Crucial Habitat Assessment Tool	NPS	National Park Service
DRECP	Desert Renewable Energy Conservation Plan	OCS	Outer Continental Shelf
EEP	Ecosystem Enhancement Program	OTIA	Oregon Transportation Investment Act
ESA	Endangered Species Act	SEZ	Solar Energy Zone
FWS	United States Fish and Wildlife Service	USGS	United States Geological Survey
FLPMA	Federal Land Policy and Management Act	WGA	Western Governors Association
NCDOT	North Carolina Department of Transportation	WRR	Water Resources Registry





EPA's Action Development Process

Interim Guidance on Considering Environmental Justice During the Development of an Action



July 2010



Message from the Administrator

Interim Guidance on Considering Environmental Justice During the Development of an Action



Far too often and for far too long, environmentalism has been viewed as a distant issue for low-income and minority communities. That view has persisted despite the fact that these same communities often carry the greatest environmental burdens. Dirty air, polluted water, and contaminated lands have significant impacts on the health and economic possibilities of the people who live in overburdened communities.

I have called on this U.S. Environmental Protection Agency to change both the perception and the situation on the ground, by broadly expanding our conversation on environmentalism and developing policies that have a measurable effect on environmental justice challenges. This document, the Interim Guidance on Considering Environmental Justice During the Development of an Action, also known as the EJ in Rulemaking Guidance, is an important tool for answering that call.

The EJ in Rulemaking Guidance provides specific strategies for giving environmental justice communities a voice in shaping EPA's rules and regulations. It outlines multiple steps that every program office can take to incorporate the needs of overburdened neighborhoods into our decision-making, scientific analysis, and rule development. I encourage all EPA staff to become familiar with environmental justice concepts and the many ways they should inform our decision-making.

As we begin implementing the EJ in Rulemaking Guidance, we will look to federal and state agencies, academia, community members, and other partners for ideas, innovations, and best practices. Contributions from all stakeholders will help us improve our regulation development process year after year and enhance EPA's work in communities where environmental improvements are needed the most. We are also counting on the input of EPA staff. As the individuals who will translate this guidance into action, I ask that you frequently share your perspectives on where we can strengthen this guidance.

EPA should set the standard for expanding the conversation on environmentalism and working for environmental justice. I'm proud to join you as we strengthen our mission to protect the health and the environment of every American community.

A handwritten signature in black ink, appearing to read "Lisa P. Jackson".

Lisa P. Jackson
Administrator

EPA's Action Development Process

Interim Guidance on Considering Environmental Justice During the Development of an Action

Foreword

The Environmental Protection Agency (EPA) is authorized by Congress to create and enforce regulations that put our nation's environmental laws into effect. Exercising this authority is one of EPA's most important and powerful tools for protecting our environment and the health of our people. EPA's regulations cover a range of environmental and public health issues, from setting standards for clean water to controlling air pollution from industry and other sources. When EPA identifies the need to develop or revise a regulation, it forms a workgroup that is led by the EPA office that will be writing the regulation. The workgroup may work for months, employing EPA expert scientists, economists, and other analysts, before an appropriate course of action is decided on and a regulation is promulgated and implemented.

A number of laws, Executive Orders, and policies direct EPA to consider issues of concern to the President, Congress, and the American public when developing regulations. To achieve the goals of Executive Order (E.O.) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, it is critical that EPA rulemaking workgroups consider environmental justice (EJ) when developing a regulation. This Guide is designed to help EPA staff incorporate EJ into the process followed at EPA for developing regulations [also known as the Action Development Process (ADP)] by: 1) describing the legal and policy framework at EPA that requires workgroups to consider EJ; 2) identifying the information that workgroups should consider when determining if there are EJ concerns involved in their proposed regulations; and 3) highlighting the kinds of questions about EJ that workgroups should ask and address in each step of developing a regulation.

The purpose of this Guide is to explicitly integrate EJ considerations into the fabric of EPA's ADP—from rule inception through all the stages leading to promulgation and implementation—requiring that workgroups meaningfully engage with and consider the impacts on minority, low-income, and indigenous populations, and tribes. The analyses required to implement this Guide may include quantitative and/or qualitative elements. Our ability to quantitatively assess EJ issues is evolving; over time we expect it to become more robust, sophisticated, and capable of ensuring that we are meeting our mission as an agency.

Our experience in implementing this Guide will contribute significantly to that evolution, and as our analytical capabilities expand, so will Agency and public expectations for us to exercise them in the development of our rules. The Guide empowers decision-makers responsible for developing rules and regulations to determine early in the process the level of focus and effort necessary and appropriate to achieve the Guide's goals. This decision can and should balance the need to make sure that strong, environmentally protective rules are developed and executed in a timely way, while ensuring that EJ is considered to the maximum extent practicable where it has the potential to impact our regulatory decisions. To achieve these goals, the Guide directs rule writers and decisions-makers to respond to three basic questions throughout the ADP:

1. How did your public participation process provide transparency and meaningful participation for minority, low-income, and indigenous populations, and tribes?
2. How did you identify and address existing and new disproportionate environmental and public health impacts on minority, low-income, and indigenous populations?
3. How did actions taken under #1 and #2 impact the outcome or final decision?

This Guide helps rulewriters understand and identify potential EJ concerns and asks them to analyze the impacts of their rules on these populations. A critical additional step is the development of additional guidance that will help workgroups conduct technical and scientific analyses of EJ issues. As workgroups use this Interim Guide, their experiences and lessons learned will be considered in both the development of the new "technical" guidance and in revising this Interim Guide later this year.

Disclaimer: This document identifies internal Agency policies and recommended procedures for EPA employees who are participants or managers developing or reviewing an action in the Action Development Process. This document is not a rule or regulation and it may not apply to a particular situation based upon the circumstances. This Guide does not change or substitute for any law, regulation, or any other legally binding requirement and is not legally enforceable. As indicated by the use of non-mandatory language such as "guidance," "recommend," "may," "should," and "can," it identifies policies and provides recommendations and does not impose any legally binding requirements.

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ACRONYMS AND ABBREVIATIONS

AA/RA:	Assistant Administrator/Regional Administrator
ADP:	Action Development Process
DABP:	Detailed Analytic Blueprint
EA:	Economic Analysis
EPA:	Environmental Protection Agency
EJ:	Environmental Justice
E.O.:	Executive Order
FAR:	Final Agency Review
FR:	Federal Register
GIS:	Geographic Information Systems
IT:	Information Technology
NAAQS:	National Ambient Air Quality Standard
NO₂:	Nitrogen Dioxide
OEJ:	Office of Environmental Justice
OGC:	Office of General Counsel
OMB:	Office of Management and Budget
OPEI:	Office of Policy, Economics, and Innovation
PABP:	Preliminary Analytic Blueprint
RAPIDS:	Rule and Policy Information and Development System
RCRA:	Resource Conservation and Recovery Act
RIA:	Regulatory Impact Analysis
RMD:	Regulatory Management Division

Overview and Background

What is the Purpose of this Guide?

Achieving environmental justice (EJ) is an Agency priority and should be factored into every decision. Incorporating EJ considerations into the Action Development Process (ADP) represents a commitment to ensuring that all Americans, regardless of age, race, economic status, or ethnicity, have access to clean water, clean air, and healthy communities. It is vital that all Agency staff identify and address disproportionate environmental and public health impacts experienced by minority, low-income, and indigenous populations.

This Guide will help Agency staff consider EJ concerns during the development of actions under the Agency's ADP, consistent with existing environmental and civil rights laws and their implementing regulations, as well as Executive Order (E.O.) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 FR 7629, Feb. 16, 1994) and EPA's EJ policies.¹

This Guide uses the definition of "Agency action" provided in EPA's ADP, which is available online at <http://intranet.epa.gov/adplibrary>. Agency actions include rules, policy statements, risk assessments, guidance documents, models that may be used in future rulemakings, and strategies that are related to regulations. In addition to providing guidance on the importance of identifying EJ concerns during the development of an action, this Guide identifies key steps throughout the ADP where EJ should be considered. As a supplement to this Guide, Agency staff may find it useful to refer to other EPA guidance documents related to risk assessment, public involvement, and economic analysis.

This Guide is an important step toward ensuring that our actions appropriately address EJ issues. A critical next step is the development of technical guidance that will provide analytical tools and methodologies for evaluating the impacts of our actions on minority, low-income, and indigenous populations. As workgroups use this Interim Guide, their experiences and lessons learned will be considered in both the development of the new technical guidance and in revising this Interim Guide later this year.

¹ EPA's historical EJ policies include: *The EPA's Environmental Justice Strategy* (1995), *Environmental Justice Implementation Plan* (1996), *Environmental Justice: Guidance Under the National Environmental Policy Act* (1997), *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* (1998), *Toolkit for Assessing Potential Allegations of Environmental Justice* (2004), Memo from Stephen L. Johnson: *Reaffirming the U.S. EPA's Commitment to Environmental Justice* (2005).

The requirements or recommendations for integrating children's health considerations into the ADP, or for consulting with federally recognized tribes when Agency actions may impact their citizens or resources, are addressed in other Agency guides, available online at <http://intranet.epa.gov/adplibrary>.

Children's Health

You should be familiar with E.O. 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, and with EPA's *Guide to Considering Children's Health When Developing EPA Actions*. You should note the important intersection between EJ concerns and children's health issues, as children in minority, low-income, and indigenous populations are more likely to be exposed to, and have increased health risks from, environmental pollution than the general population.

Indigenous Populations and Tribes

You should be familiar with E.O. 13175, *Consultation and Coordination with Indian Tribal Governments*. The Agency's responsibilities under E.O. 13175 are separate from the responsibilities under E.O. 12898 and stem from federally recognized tribes' status as sovereign governments. You should note that this Guide is intended to apply to EJ concerns affecting federally recognized, state recognized, and non-recognized tribes; individual tribal members, including those living off-reservation and Alaska Natives; and Native Hawaiians.

Who is the Audience for this Guide?

This Guide is for participants on action development workgroups and any other Agency staff involved in developing actions, including those that perform the analyses that may be used to support Agency decision-making and those that manage the process. Workgroup leads have particular responsibilities under the ADP, including identifying and addressing EJ concerns. However, each action development workgroup member has the responsibility for being familiar with, and understanding, the various statutes and Executive Orders that impact EPA's actions. Other Agency staff involved in the development of an action, but who may not be workgroup members, are also responsible for being familiar with these requirements. Therefore, this Guide uses the word "you" to refer to all workgroup members and other Agency staff. In addition, senior EPA managers may find this Guide useful in helping to ensure that EJ concerns are appropriately addressed in the development of their actions under the ADP.

How is this Guide Organized?

This Guide is organized into two parts:

Part 1:

- Describes the statutory and policy framework for considering EJ.
- Identifies concepts central to determining whether your action involves an EJ concern.

Part 2:

- Discusses the concepts and how they fit into each step of the ADP.

In addition, a separate document, *Templates for Regulatory Preambles to Address E.O. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, explains how to address E.O. 12898 in rule preambles, covering various situations. It is available in the Office of Policy, Economics, and Innovation's (OPEI's) ADP library at <http://intranet.epa.gov/adplibrary>. It is important to note that your preamble discussion should also discuss how you identified and addressed EJ concerns.

Part I:

Key Concepts for Understanding Whether Your Action Involves An Environmental Justice Concern

A. What is Environmental Justice?

Environmental justice (EJ) is central to the Agency's mission and is the responsibility of everyone at EPA. In particular, those who are involved in the development of an action need to understand the principles of EJ and how they relate to the development of an Agency action.

EPA defines "environmental justice" as the *fair treatment* and *meaningful involvement* of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.²

Fair Treatment means that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.

Meaningful Involvement means that: 1) potentially affected community members have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or health; 2) the public's contribution can influence the regulatory agency's decision; 3) the concerns of all participants involved will be considered in the decision-making process; and 4) the decision-makers seek out and facilitate the involvement of those potentially affected.

In EPA's implementation of its EJ program, the Agency has expanded the concept of fair treatment to include not only the consideration of how burdens are distributed across all populations, but also how benefits are distributed. Thus, in the ADP, you should not only evaluate the distribution of burdens by paying special attention to populations that have historically borne a disproportionate share of environmental harms and risk, but you are also encouraged to look at the distribution of the positive environmental and health consequences from our activities.

² EPA's definition of EJ can be found at <http://www.epa.gov/environmentaljustice/basics/index.html>. EPA's definition of EJ was informed by E.O. 12898, which is discussed in full detail in Part 1, Section B of this Guide. Background information on EPA's EJ program can also be found on this website.

To help achieve EPA's goal for EJ (i.e., the fair treatment and meaningful involvement of *all* people), EPA places particular emphasis on the public health of and environmental conditions affecting minority, low-income, and indigenous populations. In recognizing that these populations frequently bear a disproportionate burden of environmental harms and risks (see Figure 1), EPA works to protect them from adverse public health and environmental effects of its programs. EPA should pay particular attention to the vulnerabilities of these populations because they have historically been exposed to a combination of physical, chemical, biological, social, and cultural factors that have imposed greater environmental burdens on them than those imposed on the general population. Thus, our focus in this Guide is on minority, low-income, and indigenous populations who are or may be disproportionately impacted by environmental pollution.

Figure 1—I-710 Freeway Los Angeles



Reproduced with permission from Environmental Health Perspectives, *Global Trade Comes Home: Community Impacts of Goods Movement*, February 2008.

The densely populated communities closest to the I-710 freeway in Los Angeles County are severely impacted by pollution from goods movement and industrial activity. The Ports of Long Beach and Los Angeles are the entry point of 40 percent of all imports to the United States and 20 percent of diesel particulate emissions in Southern California. Approximately 1,200 premature deaths are associated with diesel emissions from goods movement in the South Coast Air Basin. The I-710 freeway passes through 15 cities and unincorporated areas with a population of more than 1 million residents—about 70 percent of which are minority and disproportionately low-income. The area is dense with truck traffic, industrial facilities, residences, schools, daycares, and senior centers. The region exceeds national air quality standards for 1-hour and 8-hour ozone and particulate matter 2.5 and 10. The South Coast Air Quality Management District, California Air Resources Board, and EPA are working vigorously to address the air quality issues in the region.

B. What is the Agency's Statutory and Policy Framework for Considering Environmental Justice?

For more than a decade, EPA has developed strategies, guidance documents, and implementation plans to move the Agency closer to its goal of achieving environmental justice.³ These documents, along with E.O. 12898 and existing environmental statutes and regulations, provide the framework for you to consider EJ during the development of your action.

E.O. 12898 applies to agency “programs, policies, and activities” and in general calls on each federal agency to make achieving EJ part of its mission (see [Appendix A](#) for full text of E.O. 12898). It directs agencies such as EPA, “[t]o the greatest extent practicable and permitted by law,” to “identify[...] and address[...], as appropriate, disproportionately high and adverse human health or environmental effects” of agency programs, policies, and actions on minority populations and low-income populations.⁴ Because minority, low-income, and indigenous

³ Please see footnote 1 for a listing of EPA's historical EJ policies.

⁴ In addition, the Presidential Memorandum accompanying E.O. 12898 directs federal agencies to analyze environmental effects, including human health, economic, and social effects, of federal actions when such analysis is required under the National Environmental Policy Act. See *Memorandum for the Heads of All Departments and Agencies: Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1994). Similarly, EPA promotes the consideration of economic or social effects in the ADP to better inform and manage the process of implementing Agency actions and policies.

populations have historically been underrepresented in federal agency decision-making, E.O. 12898 also aims to improve public participation of these populations in the decision-making process. E.O. 12898 applies to all Agency actions, unlike other Executive Orders that may contain categorical exclusions.

Consistent with the emphasis in the Presidential Memorandum accompanying E.O. 12898, regarding the use of existing environmental laws to help achieve the goal of EJ, EPA uses existing environmental statutes and regulations to consider and address EJ concerns.⁵ These authorities encompass the breadth of the Agency's activities, including setting standards. Some authorities direct the Agency to consider specific affected populations when setting standards, whereas others provide discretionary opportunities to incorporate EJ concerns into the action.⁶

The application of existing statutory and regulatory authorities is a critical part of EPA's efforts to prevent and address the disproportionately high and adverse effects that are the focus of E.O. 12898. This Guide uses the term "EJ concern" (defined in [Part 1, Section C](#)), which aligns with the E.O.'s focus on disproportionate impacts. It is important, however, to recognize that the Agency's statutory and regulatory authorities provide a broader basis for protecting human health and the environment and do not require a demonstration of disproportionate impacts in order to protect the health or environment of any population, including minority, low-income, and indigenous populations. Thus, consistent with its mission, the Agency may address adverse impacts in the context of developing an action without the need for showing that the impacts are disproportionate.

The E.O. has informed the development and implementation of EPA's EJ program and EJ policies. Consistent with the E.O. and the Presidential Memorandum, the Agency's EJ policies promote environmental protection by focusing attention and Agency efforts on addressing the types of environmental harms and risks that are prevalent among minority, low-income, and indigenous populations.⁷ E.O. 12898 and the Agency's EJ policies do not mandate particular outcomes for an action, but they demand that decisions involving the action be informed by a consideration of EJ issues. Where feasible, actions should prevent or address and mitigate EJ concerns.

Examples of Statutory Authority

- Clean Air Act section 109 requires EPA to set National Ambient Air Quality Standards (NAAQS) for certain air pollutants. The primary NAAQS are designed to protect public health. EPA sets primary standards that are judged to protect public health with an adequate margin of safety. EPA considers the health risks for sensitive populations, which often provides an important opportunity to consider the health impacts on minority, low-income, and indigenous populations without an additional requirement that those impacts are disproportionate.
- Under the Resource Conservation and Recovery Act (RCRA) sections 3002 through 3004, EPA is directed to establish requirements applicable to generation, transport, treatment, storage, and disposal of hazardous waste "as may be necessary to protect human health and the environment." This provides EPA with broad discretion to consider impacts on minority, low-income, and indigenous populations when developing RCRA regulations.

⁵ The Presidential Memorandum also states that existing civil rights statutes provide opportunities to address environmental hazards in minority and low-income communities: "In accordance with Title VI of the Civil Rights Act of 1964, each Federal agency shall ensure that all programs or activities receiving Federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin."

⁶ You should consult with the Office of General Counsel (OGC) and/or the appropriate Program Office staff if you have questions about the opportunities for addressing EJ concerns provided by the statutes that govern your action.

⁷ Please see footnote 1 for a listing of EPA's historical EJ policies.

C. What is an “Environmental Justice Concern?”

What is an EJ Concern?

- An EJ concern refers to disproportionate impacts on minority, low-income, or indigenous populations that exist prior to or that may be created by your proposed action.
- An EJ concern refers to lack of opportunities for minority, low-income, or indigenous populations, or tribes to meaningfully participate in the development of your action.
- An EJ concern may arise when there is an actual or potential lack of fair treatment or meaningful involvement of minority, low-income, or indigenous populations, or tribes when implementing or enforcing an Agency action.

Throughout this Guide, the term “environmental justice concern” (EJ concern) is used to indicate the actual or potential lack of fair treatment or meaningful involvement of minority, low-income, or indigenous populations, or tribes in the development, implementation, and enforcement of environmental laws, regulations, and policies. While this Guide does not provide you with guidance on how to *evaluate* potential EJ concerns, the following section will provide you with general guidelines on how to *identify* an action that might involve potential EJ concerns. (See Table 1 for a summary of actions that might involve EJ concerns).

Managers decide early in the process the appropriate level of analysis and engagement of stakeholders, considering factors such as the legal framework governing the action, the availability of relevant data and analytical methodologies, stakeholder interest, and the impacts that EJ concerns are likely to have on the actual decisions involving your action. Based on the application of these criteria, some actions will be identified for enhanced efforts that may require

developing new data, applying more advanced analytical methodologies, and conducting more extensive and targeted engagement of stakeholders. As detailed more thoroughly in Part 2, managers will convey to the workgroup their determinations on the appropriate level of analysis and stakeholder engagement.

1. An EJ concern refers to disproportionate impacts on minority, low-income, or indigenous populations that exist prior to or that may be created by your proposed action.

Your action may involve an EJ concern if it could:

- Create new disproportionate impacts on minority, low-income, or indigenous populations.
- Exacerbate existing disproportionate impacts on minority, low-income, or indigenous populations.
- Present opportunities to address existing disproportionate impacts on minority, low-income, or indigenous populations that are addressable through the action under development.

Most Agency actions will benefit public health and the environment through pollution reductions and enhanced safety measures. Nonetheless, it is important to assess whether minority, low-income, or indigenous populations are experiencing existing disproportionate impacts that you can address through your action.

Your assessment of whether the action involves disproportionate impacts may include qualitative and/or quantitative elements. As you gather preliminary information and set the context for your action, you can begin to articulate your framework for analyzing whether there are disproportionate impacts on minority, low-income, or indigenous populations. The level of analysis that is appropriate for your action will depend on a variety of factors, including the legal framework governing the action, the availability of relevant data and analytical methodologies, stakeholder interest, and the impacts that EJ concerns are likely to have on the actual decisions involving your action.

The Office of Environmental Justice (OEJ) has identified several factors, summarized below, that will help you assess whether disproportionate impacts on minority, low-income, or indigenous populations exist prior to or are created by your proposed action.⁸ These factors will help you identify conditions in which these populations may be experiencing disproportionate impacts associated with your action. Disproportionate impacts may result from a combination of several, if not all, of the factors below. In some circumstances, however, the presence of one or two of these factors alone could be sufficient to impose a disproportionate environmental hazard on a population. You should note that disproportionate impacts may also arise from factors not included here. While this list is intended to help you think about how EJ concerns may arise in your action, you are not required to analyze the existence or impact of these factors. You are encouraged to consider how your action may impact these populations, and this list is intended to aid in those considerations.

Proximity and Exposure to Environmental Hazards.

Disproportionate public health and environmental effects can be related to a community's or population's differential proximity and exposure to environmental hazards. There are many prominent examples, empirical and anecdotal, of communities affected by their proximity to environmental hazards.

Susceptible Populations. Susceptible populations are groups that are at a high risk of suffering the adverse effects of environmental hazards. Certain factors may render different groups less able to resist or tolerate an environmental stressor. These susceptibility factors may be intrinsic in nature, based on age, sex, genetics, race, or ethnicity. In addition, some susceptibility factors may be acquired (such as chronic medical conditions, lack of health care access, poor nutrition, or fitness) or be related to other pollutant exposures. Minority, low-income, and indigenous children are at greater risk because factors such as poverty, poor nutrition, pre-existing health conditions, lack of access to health care, lack of information, lack of exercise, psychosocial stress, and lack of social capital contribute to greater susceptibility to environmental hazards.



Proximity to industrial sources can cause respiratory illnesses.

⁸ For a more detailed discussion of these factors, see *Environmental Justice Factors to Consider in EPA's Regulatory Activities* in the ADP library at <http://intranet.epa.gov/adplibrary/>. More information on how each of these factors can inform environmental decision-making will be available at www.epa.gov/environmentaljustice.



Cultural practices, like basket weaving, may lead to a unique exposure pathway.

Unique Exposure Pathways. An exposure pathway is the route a substance takes from its source to its endpoint. Some populations sustain unique environmental exposures because of practices linked to their cultural background or socioeconomic status. For example, as a cultural practice, some indigenous populations rely on a diet that may include subsistence fishing and/or farming.⁹ Subsistence diets may expose these populations to toxic chemicals, such as mercury from a fish diet or other chemicals from a diet high in contaminated vegetation. There are also nondietary exposure pathways that may be unique to some

indigenous populations. For example, in populations that practice basket weaving, exposure to toxic chemicals may occur when contaminated materials are placed in the mouth during the weaving process.

Multiple and Cumulative Effects. Minority, low-income, and indigenous populations are likely to suffer a wide range of environmental hazards, ranging from poor air quality to poor housing. Numerous empirical studies and anecdotal accounts describe minority, low-income, and indigenous communities that are impacted by multiple environmental hazards, such as industrial facilities, landfills, transportation-related air pollution, poor housing, leaking underground tanks, pesticides, and incompatible land uses. Analyzing cumulative effects from multiple stressors allows a more realistic evaluation of a population's risk to pollutants. The chemical-specific focus to assessing environmental risk fails to account for the fact that these populations may be exposed to several different pollutants. EPA's *Framework for Cumulative Risk Assessment*¹⁰ can enhance an evaluation of the various aspects of cumulative risk experienced by these populations.

Ability to Participate in the Decision-Making Process. The ability, or inability, to participate in the environmental decision-making process may contribute to disproportionate impacts. Factors that contribute to the inability of a community to participate fully in the decision-making process include:

- Lack of trust
- Availability or lack of information
- Language barriers
- Socio-cultural issues
- Inability to access traditional communication channels
- Limited capacity to access technical and legal resources

Physical Infrastructure. Physical infrastructure, such as poor housing, poorly maintained public buildings (e.g., schools), or proximity to transportation hubs, contributes to making certain populations more vulnerable to environmental hazards.

⁹ In the case of subsistence fishing, these populations may be exercising legal rights, based on treaties, to do so.

¹⁰ EPA's Cumulative Risk Framework indicates that vulnerability of a population can be thought of as having four components: susceptibility of individuals, differential exposures, differential preparedness to withstand the insult, and differential ability to recover from effects. See *Framework for Cumulative Risk Assessment* (2003).

These factors are prevalent among minority, low-income, and indigenous populations. If you think that one or more of these factors is relevant to your action, you should consider whether your action involves disproportionate impacts on minority, low-income, or indigenous populations and thus, raises an EJ concern. To understand the populations affected by your proposed action, you may want to look at demographic data and consult with Program and/or Regional EJ Coordinators.¹¹ You should also consider reaching out to these populations to assess potential concerns and issues associated with your proposed action. You may also want to perform a review of relevant literature or consult with the Office of Research and Development.

2. An EJ concern refers to lack of opportunities for minority, low-income, or indigenous populations, or tribes to meaningfully participate in the development of your action.

Your action may involve an EJ concern if you do not provide meaningful involvement opportunities to minority, low-income, or indigenous populations, or tribes during the development of your action. To provide meaningful involvement opportunities that are consistent with the Agency's definition of EJ, you will likely have to go beyond the minimum requirements of standard notice and comment procedures and engage these populations or tribes early. It is often not realistic to expect meaningful involvement if you have not targeted outreach efforts to these populations or tribes prior to proposing your action. [Part 1, Section E](#), describes the Agency's policies and resources related to meaningful involvement and notes the difference between the meaningful involvement of indigenous populations as it is used in the EJ context and consultation with tribes.

You should think broadly about how actions may impact minority, low-income, and indigenous populations, and tribes. For actions that may impact these populations, you should assess what steps you will take to ensure there are sufficient opportunities for meaningful involvement during the development of your action. This includes actions that directly impact the health or environmental conditions of these populations as well as actions that involve the collection of information or data. Information or data collection actions may impact these populations or tribes if the information or data is later used for inspection and enforcement or to assess potential health or environmental impacts.¹²

¹¹ For a listing of media EJ Coordinators, please visit <http://epa.gov/environmentaljustice/contact/ej-contacts-media.html>. For a listing of regional EJ Coordinators, please visit <http://epa.gov/environmentaljustice/contact/ej-contacts-regional.html>.

¹² Agency actions involving monitoring requirements are often viewed as important data-gathering opportunities that inform the development of future actions. Also, a test rule that requires submitting particular data that may subsequently be used in an analysis about impacts presents an important opportunity. You should offer affected minority, low-income, and indigenous populations, and tribes meaningful opportunities to influence the type of data and information collected through such actions, how the data or information may be made available to the public, and how the Agency plans to use that data or information in future actions. For example, the Agency often makes data available for the public to consider by issuing a Notice of Data Availability or as part of an Advanced Notice of Proposed Rulemaking, you may consider soliciting feedback on other mechanisms for making the data or information available to these populations.

3. An EJ concern may arise when there is an actual or potential lack of fair treatment or meaningful involvement of minority, low-income, or indigenous populations, or tribes when implementing or enforcing an Agency action.

As you develop your action, you should consider how you can promote EJ not only in the *development* of the action, but also in the *implementation* of the action. You should consider whether and how you can craft your action to influence its implementation in a manner that promotes EJ. For example, listed below are common implementation issues you should consider that may be of particular concern to minority, low-income, and indigenous populations, and tribes.

Does your action support or enhance compliance assurance? Consider whether your action, when implemented, requires oversight opportunities to assess compliance with the requirements of your action. You should evaluate whether enhanced monitoring, reporting, and recordkeeping requirements can help you maximize the use of statutory and regulatory authority to assess and ensure compliance where needed, to protect adversely affected populations, including minority, low-income, and indigenous populations.

Does your action support enforcement against violators? Non-compliance issues may impact the public health and environmental conditions affecting minority, low-income, and indigenous populations, particularly when violations are occurring in areas already disproportionately impacted by environmental hazards. Ensuring that your action is written to be enforceable is critically important to address EJ concerns that may arise as a result of non-compliance. You should also consider the record of industry-specific non-compliance and evaluate whether the rule should include additional requirements. The decision-maker should evaluate the root cause for the non-compliance record when considering whether additional requirements are necessary. For example, if the non-compliance record is the result of inadequate capacity of any tribal or rural entity, additional requirements in the rule may not be warranted.

Does your action promote transparency and meaningful involvement? Actions that promote transparency and meaningful involvement during implementation can make it easier to engage minority, low-income, and indigenous populations, and tribes, which may improve their ability to spot non-compliance issues or identify ways in which implementation can be improved. For example, you should ensure that compliance information is readily available and accessible to the affected public. You should also assess how your action impacts the ability of minority, low-income, and indigenous populations, and tribes to meaningfully participate in subsequent environmental decision-making processes (e.g., permits, National Environmental Policy Act assessments, State Implementation Plans, other reassessments of Agency actions).

Does your action encourage or require state, local, and tribal governments to consider EJ as they implement federal programs? State, local, and tribal governments are the primary implementers of many programs that the Agency

administers.¹³ If you have identified possible EJ concerns that might arise during state, local, or tribal implementation, you should consider how your action should address those issues (see example below).

**Nitrogen Dioxide (NO₂)
National Ambient Air Quality Standard (NAAQS)**

On January 22, 2010, EPA strengthened the health-based NAAQS for NO₂. To determine compliance with the new standard, EPA established new ambient air monitoring and reporting requirements for NO₂. Ambient NO₂ monitoring data are collected by state, local, and tribal monitoring agencies in accordance with monitoring requirements contained in 40 CFR parts 50, 53, and 58. Under the new standard, EPA is requiring Regional Administrators to work with states to site 40 NO₂ monitors, above the minimum number required in the two-tier network design, focused primarily in susceptible and vulnerable communities exposed to NO₂ concentrations that have the potential to approach or exceed NAAQS.

Does your action provide good background information for those who will be involved in drafting the individual permits later? Permits are an important vehicle through which Agency actions are implemented within a specific location. Permits implement generally applicable regulatory standards by applying those standards to specific discharges and emissions of pollutants, which in some cases may take into account actual exposure experienced by minority, low-income, and indigenous populations in that location. To facilitate the drafting of subsequent permits, it is important to document whether the assumptions that form the basis of your generally applicable regulatory standard account for cumulative impacts, vulnerable or susceptible populations, or other issues related to EJ concerns.¹⁴ This will provide background information for whether it may be necessary to explore additional opportunities, within existing statutory authorities, to consider the impacts on these populations in a proposed permitting action.

¹³ EPA reviews state, local, and tribal programs to determine if they meet applicable requirements for federal approval. If EPA finds that the program meets those requirements, it approves the state, local, or tribal government to implement the federal program. State and local governments that receive grants to implement federal programs are also subject to Title VI of the Civil Rights Act of 1964, as amended. Title VI prohibits recipients from discriminating on the basis of race, color, or national origin. A recipient's obligation under Title VI is layered on separate but related obligations under the federal or state environmental laws.

¹⁴ In some situations, it may be appropriate for EPA to seek information about specific exposure pathways associated with cultural or traditional practices before formulating assumptions or making a determination of whether the assumptions account for a population's vulnerability.

D. How Can You Integrate EJ Concerns Into Your Analyses?

Workgroups should use existing guidance and resources, as well as experiences and lessons learned from individual rulemakings, to conduct analyses that incorporate EJ considerations. An Agency workgroup is assessing and developing analytical tools and methodologies for evaluating impacts on minority, low-income, and indigenous populations. Table 1 provides a list of available guidance and resources. See also Appendix E.

Table 1 – Guidance and Resources on Analysis

Environmental Justice Assessment Tools http://www.epa.gov/Compliance/resources/policies/ej/#tools	Identifies areas with potential EJ concerns.
Compliance Resources http://www.epa.gov/Compliance/resources/policies/ej/#tools	Provides tools and guidance for assessing potential EJ concerns and implementing EJ into EPA Programs.
Guidelines for Preparing Economic Analyses http://yosemite.epa.gov/ee/epa/eed.nsf/pages/Guidelines.html	Provides guidance on analyzing the economic impacts of regulations and policies and assessing the distribution of costs and benefits among various segments of the population, with a particular focus on disadvantaged and vulnerable groups.
Framework for Cumulative Risk Assessment (2003) http://oaspub.epa.gov/eims/eimscomm.getfile?p_download_id=36941	Represents the first step in a long-term effort to develop cumulative risk assessment guidelines; offers a simple, flexible structure for conducting and evaluating cumulative risk assessment within the EPA.
Templates for Regulatory Preambles to Address E.O. 12898 http://intranet.epa.gov/adplibrary/adp-templates/index.htm#12898	Provides information to guide the workgroup chair in determining the appropriate template to use with the action under development; text of templates included.
Risk Assessment http://www.epa.gov/risk/	Provides basic information for the public about environmental risk assessments, as well as a comprehensive set of links to key EPA tools, guidance and guidelines, models, handbooks, databases, and assessments.
Risk Characterization Handbook http://www.epa.gov/osa/spc/pdfs/rchandbk.pdf	Serves as a single, centralized body of risk characterization implementation guidance to help make the risk characterization process transparent and the related products clear, consistent, and reasonable.
Distributional Analyses: Economic Impact Analyses and Equity Assessments http://yosemite.epa.gov/ee/epa/eed.nsf/pages/Guidelines.html	Provides information about equity assessments and how policies/actions affect specific populations (See Chapter 9).
Fact Sheet: Guidelines for Preparing Economic Analyses http://yosemite.epa.gov/ee/epa/eed.nsf/pages/Guidelines.html	Two-page fact sheet on the available guidelines.
Risk Tools – Human Health http://cfpub.epa.gov/ncea/cfm/nceatools_human.cfm	Resource for models, databases, and other tools.
Scientific Analyses http://cfpub.epa.gov/ncea/index.cfm	Presents critical analyses and summaries of scientific consensus, vetted through a rigorous peer review process, on the risks of pollutants to human health and the natural environment.
Hazard Identification http://www.epa.gov/risk_assessment/hazardous-identification.htm and www.epa.gov/risk	Explains hazard identification, the first of four steps in the risk assessment process.
Sociodemographic Data Used for Identifying Potentially Highly Exposed Populations http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=22562	Presents data related to factors that potentially impact an individual's or group's exposure to environmental contaminants based on activity patterns (how time is spent), microenvironments (locations where time is spent), and other sociodemographic data (e.g., age, gender, race, economic status). Discusses populations potentially more exposed to various chemicals of concern.

E. How Can You Achieve Meaningful Involvement?

Public involvement works best when you consult with communities early and often and when your efforts follow a decision-making process that the potentially impacted community understands and, to the extent feasible, has had a role in designing. Communities have unique knowledge of their goals, needs, and vulnerabilities. Through early public involvement, you can obtain information on issues affecting the community that the Agency may not be aware of and increase the understanding of such issues in the context of developing your action.

There are numerous resources you can use to help determine what type and level of involvement is appropriate for your action.¹⁵ For some actions, it may be appropriate to engage affected communities, while for others it may be appropriate to go even further and invite them to the table to develop alternatives for consideration. The Agency's public involvement policy and Web pages are designed to help users understand how:

EPA's Public Involvement Policy: 7 Basic Steps for Effective Public Involvement

1. Plan and budget for public involvement activities.
2. Identify the interested and affected public.
3. Consider providing technical or financial assistance to the public to facilitate involvement.
4. Provide information and outreach to the public.
5. Conduct public consultation and involvement activities.
6. Review and use input and provide feedback to the public.
7. Evaluate public involvement activities.

- Different types of public involvement relate to EPA programs.
- Public input can be used in EPA decision-making.
- Tools can be used to support effective public involvement.

Also, statutory and regulatory authorities set minimum standards for public involvement, so it is important to be familiar with the specific requirements for public notice and involvement that are associated with the development of your action.¹⁶ However, relying on the minimum notice and comment requirements is often not enough to achieve meaningful involvement for minority, low-income, and indigenous populations.

Promoting meaningful involvement often requires special efforts to connect with populations that have been historically underrepresented in decision-making and that have a wide range of educational levels, literacy, or proficiency in English. It will likely be necessary to tailor outreach materials to be concise, understandable, and readily accessible to the communities you are trying to reach.¹⁷

¹⁵ For example, the International Association for Public Participation has developed materials that discuss the spectrum of public involvement, ranging from informing to empowering the public. Its publications and public involvement training opportunities can be found at www.iap2.org. See also EPA's extensive public involvement resources at <http://www.epa.gov/publicinvolvement>.

¹⁶ For a listing of key EPA program's public participation requirements, see *Engaging the American People: A Review of EPA's Public Participation Policy and Regulations with Recommendations for Action*, Appendix A (2000), available at http://www.epa.gov/publicinvolvement/pdf/eap_appendices.pdf.

¹⁷ For more information, see EPA's public involvement brochure, titled "How to Involve Environmental Justice Communities" (<http://www.epa.gov/stakeholders/brochures/justice.pdf>) and the "Model Plan for Public Participation," (<http://www.epa.gov/environmentaljustice/resources/publications/nejac/model-public-part-plan.pdf>) developed by the National Environmental Justice Advisory Council.

Involving these populations in a meaningful way presents challenges and opportunities that are different than those presented by a general public involvement effort, such as:

- Conveying issues in ways that are tailored (e.g., translation, timing, location) to each community.
- Bridging cultural and economic differences that affect participation.
- Using communication techniques that enable more effective interaction with other participants.
- Developing partnerships on a one-to-one or small-group basis to ensure representation.
- Developing trust between government and potentially affected populations.
- Developing community capacity to effectively participate in future decision-making processes.

Web-Based IT Tools

Referred to as “Web 2.0 tools,” these tools generally:

- Emphasize participation.
- Harness collective intelligence.
- Reach a variety of audiences by facilitating customer self-service.
- Redesign information and services based on the features that customers are using most.
- Provide information that can be accessed by more devices than just a computer (e.g., mobile phone, MP3 player).
- Develop and deploy applications that can scale quickly to meet the size of the task.

In planning your public involvement, you should identify different ways you might be able to best engage your audience. For some, you should consider using Web-based information technology (IT) tools, particularly those that are more user-centered, collaborative, or interactive. On the other hand, some communities and populations do not have access to the most modern

communications tools. Remote towns and villages disseminate information using local radio stations, CB radio, local newspapers, posters at grocery stores or trading posts, or village/community center/chapter meetings. Many times, reaching parents of school-age children may be facilitated through schools.

It is important to note the difference between the meaningful involvement of indigenous populations as it is used in the EJ context and consultation with tribes.¹⁸ The federal government has a unique government-to-government relationship with federally recognized tribes, which arises from Indian treaties, statutes,

Indigenous Populations and Tribes

You should be familiar with E.O. 13175, *Consultation and Coordination with Indian Tribal Government*. The Agency’s responsibilities under E.O. 13175 are separate from the responsibilities under E.O. 12898 and stem from federally recognized tribes’ status as sovereign governments. You should note that this Guide is intended to apply to EJ concerns affecting federally recognized, state recognized, and non-recognized tribes; individual tribal members, including those living off-reservation and Alaska Natives; and Native Hawaiians.

Executive Orders, and the historical relations between the United States and Indian Nations. The federal government has a trust responsibility to federally recognized tribes, and EPA, like other federal agencies, must act consistently with the federal trust responsibility when taking actions that affect tribes. Part of this responsibility includes consulting with tribes and considering their interests when taking actions that may affect them or their resources. Tribal consultation is the subject of E.O. 13175.

¹⁸ For information on the development of EPA’s Tribal Consultation Policy, please contact your office’s tribal coordinator or the American Indian Environmental Office.

Part 2:

Considering Environmental Justice During the Action Development Process

This section of the Guide describes the key issues related to considering EJ during the development of an action under the ADP. It is designed to help you identify opportunities in the ADP where you can:

- Identify possible EJ concerns.
- Plan to achieve meaningful involvement.
- Plan to evaluate and address those EJ concerns.
- Discuss potential or identified EJ concerns with management.
- Compare how options under consideration would change the environmental and public health impacts on minority, low-income, and indigenous populations.
- Document your efforts to achieve meaningful involvement and address potential EJ concerns.

What is the Action Development Process?

The ADP is a method for producing quality actions, such as regulations, policies, guidance, strategies, and reports. It ensures that EPA uses the best available information to support its actions and that scientific, economic, and policy issues are adequately coordinated across the Agency during the various stages of action development. Activities that implement E.O. 12898 should be undertaken within the framework of this process. For more information, see *EPA's Action Development Process: Guidance for EPA Staff on Developing Quality Actions*, available on OPEI's intranet site <http://intranet.epa.gov/adplibrary>.

An Agency workgroup is assessing and developing analytical tools and methodologies for evaluating impacts on minority, low-income, and indigenous populations. For more information, see Part 1, Section D, and Appendix E.

A. Who is Responsible for Considering EJ During the Development of an Action Under the ADP?

All workgroup members are responsible for working to protect minority, low-income, and indigenous populations from adverse public health and environmental impacts of our programs, policies, and activities to the extent permitted by applicable laws, including environmental and civil rights statutes and their implementing regulations, consistent with E.O. 12898. Based on your participation in the development of an action, you may have

additional specific responsibilities, as outlined below. Your program office may, however, assign responsibilities differently than as described below, so it is important to be familiar with your office's unique allocation of responsibilities for considering EJ in the ADP. See the ADP Guidance for general information about the roles and responsibilities of the different participants in the development of an action.

1. Managers. In general, as the ultimate decision-makers for the action, EPA managers establish policy priorities, communicate expectations for the workgroup, identify issues of significant concern, and guide the process of developing the action. As a result, managers play a key role in ensuring that the potential EJ implications of an action are considered during the ADP. Managers decide early in the process the appropriate level of analysis and engagement of stakeholders, considering factors such as the legal framework governing the action, the availability of relevant data and analytical methodologies, stakeholder interest, and the impacts that EJ concerns are likely to have on the actual decisions involving your action. Based on the application of these criteria, some actions will be identified for enhanced efforts, which may require developing new data, applying more advanced analytical methodologies, and conducting more extensive and targeted engagement of stakeholders. Managers will convey their determinations on the appropriate level of analysis and stakeholder engagement to the workgroup and to OPEI.

Managers establish policy priorities, communicate expectations to the workgroup, decide whether or not an identified EJ concern warrants further evaluation, and determine the level of analysis and public involvement and the resources available for those activities.

In particular, managers are likely to ask workgroups about their efforts to address the following questions at key points during the development of the action under the ADP (such as at Early Guidance, Options Selection, or Final Agency Review):

1. How will your (or how did your) public participation process provide transparency and meaningful participation for minority, low-income, and indigenous populations, and tribes?
2. How do you plan to (or how did you) identify and address existing and new disproportionate environmental and public health impacts on minority, low-income, and indigenous populations during the rulemaking process?
3. How did the actions taken under #1 and #2 impact the outcome or final decision?

Appendix C provides a quick reference for EPA managers on when and how they can participate in the action's development to ensure that the workgroup identifies and evaluates potential EJ concerns.

2. The Chair or Action Lead. As the leader of the effort, your role is to facilitate and oversee the effort to achieve meaningful involvement and to consider EJ concerns during the development of the action. Appendix D provides a checklist to identify what the chair may need to know and/or do to integrate EJ into the development of the action.

3. The Workgroup. The workgroup is responsible for ensuring meaningful involvement and consideration of EJ concerns during the development of the action under the ADP. Workgroup members influence the scope and content of analyses of EJ concerns that support an action. Workgroup members, as representatives of their program offices or regions, should keep their senior management informed of EJ concerns and decisions in a timely manner so that the program offices or Regions can formulate appropriate responses.

What is the Workgroup?

The workgroup consists of representatives from interested program offices and Regions. The workgroup develops the draft regulation or other action, involving its members throughout the ADP. Workgroup members represent the position of their program office or Region. Tier 1 and Tier 2 actions call for formation of action development workgroups. Even though Tier 3 actions do not normally call for teams/workgroups, the lead program should consider the level of assistance needed from Regions and other offices.

In general, the workgroup will identify EJ concerns that may arise during action development and opportunities available to enhance the effectiveness of an action by addressing EJ concerns. By identifying and addressing EJ concerns, the workgroup ensures that its actions comply with applicable requirements and that it will be prepared to describe its efforts to achieve meaningful involvement and address EJ concerns during the development of the action.

4. The Analysts. For the most part, the analysts—those performing the economic or scientific analyses—are likely to be members of the workgroup. In some cases, however, the analysts may only be involved in the analytic work performed as part of the development of an action. In either case, the analyst plays a key role in identifying the analytical topics that will need to be addressed during the development of an action, as well as leading or actively participating in the analytical efforts.

In general, and depending on the action under development, the workgroup and/or analyst may need to consider whether one or more scientific or economic analyses are needed to support the action.¹⁹ It is also important to note that these analyses may be quantitative, qualitative, or both.

Economic Analysis:

EPA's peer-reviewed *Guidelines for Preparing Economic Analyses* establish a sound scientific framework for performing economic analyses of environmental regulations and policies. They provide guidance on analyzing the distribution of costs and benefits among various segments of the population, with a particular focus on disadvantaged or vulnerable groups.²⁰ In many EPA actions, the following areas of analysis could be informed by economics:

- Characterization of the industry and the environmental/health problem.
- Costs of options (e.g., social costs, discounting, no-action scenarios).
- Benefits of options (e.g., monetization, distributional effects, sensitive populations, valuation of health/mortality impacts on children, latency, ecological benefits).

¹⁹ See EPA's *Action Development Process Guidelines for Preparing Analytic Blueprints*, p. 14, available electronically at <http://intranet.epa.gov/adplibrary/documents/abp09-30-04.pdf>.

²⁰ See **Chapter 9: Distributional Analyses: Economic Impact Analyses and Equity Assessments**. Economic information is important to the evaluation of at least two consequences—a regulation's efficiency and its distributional consequences. In addition, an equity assessment can provide information to decision-makers on how policies affect specific populations. For example, disadvantaged or vulnerable populations (e.g., low-income households) may be of particular concern.

- Cross-media impacts.
- Results and option selection (e.g., presentation of policy alternatives, incremental effects).
- Other analyses involving economics.

Scientific Analysis:

The quality of scientific analysis that informs EPA decisions is vital to the credibility of those decisions and ultimately EPA's effectiveness in protecting public health and the environment. Scientific analyses and reviews encompass topics beyond just biology and chemistry. For example, scientific research is crucial to informing risk assessments, hazard assessments, exposure assessments, or other studies, as well as shedding light on what technologies might be feasible. EPA's peer-reviewed Risk Assessment Guidelines (<http://www.epa.gov/risk>) establish sound scientific procedures and methods to help guide EPA scientists in conducting risk assessments, and also serve to inform EPA decision-makers and the public about these procedures. The guidelines include procedures and methods for assessing susceptibility from early life exposures to carcinogens and a framework for assessing cumulative risks, both of which are important considerations when assessing whether your action involves disproportionate impacts, and thus, a potential EJ concern.

Other EPA peer-reviewed guidelines are also available that provide procedures and methods for assessing the potential exposures to and hazards of chemicals and other agents. The following examples of scientific analyses are used to support many Agency actions:²¹

- Risk Assessment
 - Hazard Identification²²
 - Exposure Assessment
 - Risk Characterization
- Cumulative Risk Assessment
- Technology Feasibility Analysis

As discussed in more detail later in this Guide, the plan for addressing the scientific and/or economic analyses needed to support the action should be specifically addressed in the Analytic Blueprint. As part of the planning effort, the analyst can help identify available data and/or information that may need to be collected to inform the planning process and be used in the analyses. As a result, the analysts can play a key role in identifying and evaluating the potential EJ concerns related to the options under consideration during the development of an action.

²¹ For more information on EPA's scientific analyses, please visit the National Center for Environmental Assessment at <http://cfpub.epa.gov/ncea/index.cfm>. You can also find valuable information at www.epa.gov/risk.

²² For more information, please visit <http://www.epa.gov/ncea/risk/hazardous-identification.htm>.

B. How Do You Consider Whether You Need to Evaluate EJ Concerns During the Development of Your Action Under the ADP?

As stated throughout this Guide, E.O. 12898 and EPA's EJ policies apply to all Agency actions, so you will need to consider whether EJ concerns may be an issue with regard to your action. Your program office may have additional guidance applicable to the ADP or requirements for program-specific actions that involve similar or identical issues. Your program office may also have a screening process to help identify whether an action or category of actions might have the potential to impact minority, low-income, or indigenous populations. Before you begin, check with your EJ Coordinator to find out if your program office has developed any specific guidance or screening process applicable to your action.

This Guide encourages program offices to utilize a screening process to help you determine whether your action may raise potential EJ concerns requiring further evaluation as you go through the ADP, or whether EJ concerns are not expected to be a factor at all in your action. This screening can help your office focus its resources and efforts on actions where there are opportunities to identify and address EJ concerns. The screening decision may need to be revisited multiple times in the beginning stages of the ADP as more information becomes available. As part of this process, you should also consult with OGC and/or the appropriate program office staff if you have questions about the opportunities for addressing EJ concerns that are provided by the statutes that govern your action.

There is no prescribed formula for how a program office should conduct a screening process. A screening process may have several important elements, including:

1. A description of the potential impacts on and existing risks to minority, low-income, and indigenous populations. This may include:
 - The proximity of what you are regulating to these populations.
 - The number of sources that may be impacting these populations.
 - The nature and amount of pollutants that may be impacting these populations.
 - Whether there are any unique exposure pathways involved.
 - Expressed community concerns about your action, if any.
2. A description of potential impacts on meaningful involvement. This may entail understanding whether your action presents opportunities to improve public involvement requirements or limits opportunities in some way.

Depending on your program office needs, a screening process may include additional considerations for circumstances where it may be impracticable to do an evaluation of EJ concerns, or where an evaluation of EJ concerns may not have the potential to influence the outcome of the action and options under consideration.

EPA managers will make a decision after considering your determination of whether or not EJ concerns will need further evaluation as you develop your action under the ADP. It is important to document your manager's decision, including the information on which this

decision is based. This documentation should become part of the record for your action and will help establish that you are complying with the directives of E.O. 12898 and EJ policies. Managers may want to review this documentation and discuss whether further consideration of EJ concerns is appropriate.

C. When Should You Consider EJ Concerns During the Development of Your Action Under the ADP?

The following is a description of the potential opportunities for considering EJ concerns at the specific steps in developing an action under the ADP. If you are unable to follow the activities for a particular step of the ADP, they may be performed at later steps, as appropriate.

The procedural steps under the Agency's ADP may vary based on the specific tier designation. The procedural steps described in this Guide primarily apply to actions developed under Tier 1 and 2 of the ADP, because actions developed under Tier 3 may not follow all the same procedural steps. For example, a formal Analytic Blueprint (preliminary or detailed) is optional for actions developed under Tier 3. Even though a particular ADP step may not apply to your Tier 3 action, you should consider EJ concerns regardless of the tiering level assigned to your action. E.O. 12898 and the Agency's EJ policies apply to all Agency actions.

[Appendix B](#) includes a flowchart titled *Incorporating Environmental Justice into Tier 1 and 2 Actions under the ADP*, which outlines the ADP procedural steps for Tier 1 and 2 actions to illustrate when EJ concerns might be integrated at various steps throughout the ADP. [Appendix B](#) also includes a flowchart that shows when EJ-related questions could be asked and answered during the development of a Tier 3 action. The discussion that follows in this Guide is linked to the numbered steps used in these process flowcharts.

ADP Steps 1 and 2 – Action Initiation and Tiering

Once the Agency decides to initiate an action (Steps 1 and 2), the next step of the ADP is tiering. At this point, the lead must fill out a tiering form in the Rule and Policy Information and Development System (RAPIDS) that provides basic information about the action being initiated. RAPIDS is a tracking system for Tier 1 and 2 rules. Table 2 displays the EJ question you will currently find in RAPIDS.²³ For some offices, the EJ question asked at tiering may also serve the function of the initial screening process discussed in the previous section. For other offices, you might have a screening process in place that can inform how you answer this question at tiering.

²³ This question is subject to change as we gain more experience integrating EJ concerns into the ADP.

Table 2 – EJ Question in RAPIDS

Environmental Justice	
Does this action involve a topic that is likely to be of particular interest to or have particular impact upon minority, low-income, or indigenous populations, or tribes?	
<p><input type="radio"/> Yes – If you answer Yes, please check a minimum of one of the following options:</p> <p><input type="checkbox"/> The action is likely to impact the health of these populations.</p> <p><input type="checkbox"/> The action is likely to impact the environmental conditions of these populations.</p> <p><input type="checkbox"/> The action is likely to present an opportunity to address an existing disproportionate impact on these populations.</p> <p><input type="checkbox"/> The action is likely to result in the collection of information or data that could be used to assess potential impacts on the health or environmental conditions of these populations or tribes.</p> <p><input type="checkbox"/> The action is likely to affect the availability of information to these populations or tribes.</p> <p><input type="checkbox"/> Other reasons - Explain: _____</p>	Comments:
<p><input type="radio"/> No – Selecting No means that this action is not likely to be of any particular interest to these populations or tribes. Explain: _____</p>	Comments:
<p><input type="radio"/> TBD – Selecting TBD means that, given the information available at this time, the Agency does not know if these populations or tribes will be particularly interested in this action.</p>	Comments:

As you prepare to answer the EJ question displayed in Table 2, there are some important things you should keep in mind.

- You are expected to make an informed decision based on readily accessible information and what you already know about the action and its potential EJ implications.
- Note that the question asks about actions that may be of *particular interest to* or have *particular impacts on* minority, low-income, or indigenous populations, or tribes. This is meant to inform the determination of whether your action may involve a potential EJ concern as defined in Part 1 of this Guide. The question recognizes that at this early step in the ADP, you might not have sufficient information to determine whether an EJ concern is associated with your action. You can use the checklist provided in Table 2 to help determine whether your action may involve a subject that is of particular interest to or may have particular impacts on these populations. Keep in mind that the list is illustrative.

- The question encourages you to think broadly about whether your action may be of *particular interest* to minority, low-income, or indigenous populations, or tribes. An action may be of particular interest if it concerns a topic that these populations or tribes have identified as important. For example, the development of national ambient air quality standards or permitting rules may be of interest, even though they may not have particular impacts on these populations or tribes. If an action may be of particular interest to, but may not have particular impacts on these populations or tribes, you may not need to evaluate your action for EJ concerns, but you may need to provide opportunities for meaningful involvement in the development of your action.
- Answering “yes” to this question signals that EJ concerns are likely to be involved in your action. While this does not mean that you are required to do an in-depth analysis for EJ, you are expected to evaluate EJ concerns as you develop your action and consider how your action may address those concerns based on readily available data. If you believe your action might involve a potential EJ concern, you may request that an EJ Coordinator be assigned to join the workgroup or otherwise support the action. Do this by requesting OPEI or OEJ assistance in assigning an EJ Coordinator in the “Workgroup” section of the tiering form or by describing the potential concerns in the section labeled “Additional information or assistance needed.”
- Answering “TBD” (To Be Determined) to this question signals that you should consider whether there are potential EJ concerns associated with your action as you go through the ADP. You are expected to build in the proper outreach and evaluation activities to determine whether EJ concerns are involved and how those concerns can be addressed before you develop the final action.
- Your answer to this question (along with other information on the tiering form) will be part of the Agency’s Rulemaking Gateway, the Internet portal for Tier 1 and Tier 2 rules. The Gateway offers the public a means of learning about and tracking actions. One of the Gateway features allows you to sort actions based on the responses to the EJ question displayed in Table 2. The Gateway is updated on a monthly basis, so any updates you make to your action’s Maintenance Form in RAPIDS is reflected on the Gateway throughout the life of the action. You can access the Rulemaking Gateway Website at <http://www.epa.gov/rulemaking/>.
- You will be asked to reconsider your answer to this question during the semi-annual update of the Agency’s Regulatory Agenda. This will provide you with an opportunity to update your answer based on new information or the results of your evaluation.

What is the Rulemaking Gateway?

The Rulemaking Gateway, a new feature of EPA’s [Laws & Regulations Website](#), presents general information about EPA’s rulemakings to the public in a user friendly format. In addition to providing basic information such as the title, an abstract, the docket number, and major milestones, the Gateway provides available information on potential effects on a variety of institutions, communities, and specific populations (e.g., children’s health, environmental justice, tribal governments) associated with your action.

What is the PABP?

The PABP is an early planning document that describes the major issues that need to be addressed in rule development to meet statutory, regulatory, and Agency requirements. The purposes of the PABP are to:

- Promote management involvement by supporting early management guidance on basic issues.
- Alert workgroup members and their offices to areas where work should begin.
- Identify data needs and plan collection efforts.
- Outline the Detailed Blueprint.

ADP Step 3 – Preliminary Analytic Blueprint (PABP)

The PABP, which is required for all Tier 1 and 2 actions, provides an opportunity to revisit your screening decision and identify what steps you will take to ensure that EJ concerns are considered in the development of the action. It is important to take the time to scope out explicitly the parameters of inquiry relating to EJ, or put another way, to articulate the potential EJ concerns and how you will explore and approach them in developing the action.

Careful consideration of EJ concerns in the PABP can improve your action by ensuring appropriate consideration in planning the activities of your workgroup; facilitating cross-Agency sharing of valuable information, expertise, and perspectives; and fostering early agreement on key questions through a structured workgroup process and written documents. This early planning will help you foster collaborative efforts to develop a well-supported and documented action and avoid last minute workgroup debates over the type of information or analyses that should be available. For actions where EJ concerns may be an important consideration, you should consider consulting with individuals with EJ expertise. You should also be aware of opportunities to coordinate data collection and analytical efforts with children's health impact analyses.²⁴

Consider a broad array of opportunities to integrate the meaningful involvement of minority, low-income, and indigenous populations, and tribes in the development and implementation of your action.

As you develop your action:

- Reach out to potentially affected populations and tribes early.
- Include them in data gathering.
- Engage them in developing options to address the issue(s).
- Consider their role for future activities.

If your action establishes a framework or regulatory standards for subsequent actions, make sure to:

- Provide opportunities for public involvement in the subsequent actions.
- Engage potentially affected population and tribes in the subsequent actions.

As you implement the action and continue to manage the ongoing program:

- Build awareness.
- Provide information.
- Involve potentially affected populations and tribes in program activities.
- Seek feedback.
- Be transparent.

²⁴ See E.O. 13045, "Protection of Children from Environmental Health Risks and Safety Risks," and EPA's Guide to Considering Children's Health When Developing EPA Actions: Implementing Executive Order 13045 and EPA's Policy on Evaluating Health Risks to Children.

If you believe the action may have EJ concerns, then your PABP should (to the extent possible):

- Identify potentially affected populations and tribes, as well as others who might be interested in the action.
- Outline plans and resource needs for achieving meaningful involvement (e.g., consultation with tribes, engagement of potentially interested stakeholders).
- Describe the plans and resource needs for evaluating impacts, including potential disproportionate impacts.
- Identify available EJ assessment tools, as well as related needs for data collection, expertise, and resources.
- Identify potential analytical issues that will need to be raised to management or otherwise addressed.

Please note that the PABP does not have to describe the details of the analyses that might be needed to evaluate EJ concerns.

It may be beneficial to develop a separate scoping document that becomes part of the PABP, for the purposes of increasing accountability and visibility of evaluating EJ concerns. For example, a scoping document may be a useful vehicle to provide an opportunity for meaningful involvement early in the action's development.

Given that the framework for identifying and addressing EJ concerns is part of an iterative process, it is important to revisit, as appropriate, the scope of inquiry relating to your evaluation of EJ concerns in later stages of the ADP as information and ideas continue to develop.

The PABP is an important vehicle for raising EJ concerns to management. Once developed, you should submit the PABP to senior management as part of your request for Early Guidance, typically within 60 days of the date the tiering designation was approved by OPEI. This allows workgroup members to consult with their management on the general direction for the action. All members of the workgroup should agree beforehand that the PABP is ready to be provided to senior management. If workgroup members cannot agree, the issues of disagreement should be presented to management for resolution. The expectation is that management will give early guidance within 30 days of receiving the PABP.

ADP Step 4 – Early Guidance

In this step, managers discuss their expectation that you consider potential EJ concerns during action development. Early Guidance always comes from senior management, although the level of management giving guidance differs for Tier 1 and Tier 2 actions:

- **Tier 1:** The Administrator or Deputy Administrator provides Early Guidance,

Early Guidance from Managers

Determines the appropriate level of analysis and engagement of stakeholders, based on:

- Stakeholder interest.
- Legal framework governing the action.
- Availability of data.
- Availability of resources and timeline for developing the action.
- Impacts that EJ concerns are likely to have on the actual decisions involving your action.

with input from participating Assistant Administrators and Regional Administrators (AAs/RAs) from across the Agency. If the guidance is not given directly to the workgroup, the lead AA/RA is responsible for assuring that it is communicated to them.

- **Tier 2:** The lead AA/RA, in consultation with other participating AAs/RAs, gives Early Guidance to the workgroup. The lead AA/RA should consider policy issues and priorities of other AAs/RAs when giving Early Guidance. In some cases, the AAs/RAs may delegate this authority explicitly to an Office Director.

In addition, at Early Guidance, discuss with your manager your proposed approaches for considering potential EJ concerns and any potential complications or issues in doing so. Be prepared to respond to management questions about whether your action may involve an EJ concern, and how this was ascertained. For actions that may involve an EJ concern, you should also be prepared to respond to the management questions outlined in [Section A](#) above. You should be prepared to explain resources required to identify and evaluate EJ concerns, including data needs.

ADP Step 5 — Detailed Analytic Blueprint (DABP)

The DABP should incorporate the directions received through Early Guidance from senior management. As such, the preparation of the DABP provides you with another opportunity to plan key activities for determining whether and how potential EJ concerns will be identified and considered during the development of the action. This includes the activities for analysis and outreach, including scientific and economic analysis, consultation with tribes, stakeholder involvement (including meaningful involvement of minority, low-income, and indigenous populations), information gathering, alternative approaches considered, the timeline, and opportunities to coordinate data collection and analytical efforts with children's health impacts analyses. If there are identified EJ concerns, you can also develop a detailed public involvement plan that considers the needs, capacities, cultural practices, and languages of the affected communities.

What is the DABP?

The DABP builds on the PABP to provide decision-makers with a detailed description of both the information that will be available to help them select options and the analyses and other activities that will be conducted to prepare this information. A DABP serves four purposes:

- Incorporates senior management guidance received on the PABP.
- Alerts management and various offices to any important issues that have arisen since the PABP.
- Helps the workgroup plan and schedule the analysis.
- Documents the agreement among the workgroup participants and management on the scope and framework of the analyses.

The DABP may 1) identify a preliminary plan to confirm that your action does involve EJ concerns, 2) estimate the magnitude of such concerns, and 3) guide the initial development of any options regarding those concerns. If the workgroup decides to prepare a quantitative or qualitative evaluation of EJ concerns, the DABP should describe:

- The office and workgroup members with lead responsibility for the preliminary and detailed assessments of EJ concerns.
- The data needs and data sources for the EJ assessment.
- The scope and basic methodology of the EJ assessment.
- The outputs of the EJ assessment.
- The schedule and resources required to prepare the EJ assessment.

In addition, the DABP should describe your planned activities to ensure that you can answer the following questions at Options Selection:

1. How did your public participation process provide transparency and meaningful participation for minority, low-income, and indigenous populations, and tribes?

This question asks you to document the proactive steps taken, beyond minimum notice and comment opportunities, to meaningfully engage these populations and tribes in the development of your action. This would include any outreach (including any outreach to EPA Regional Offices; state, tribal, and local governments; outreach specialists; and community organizations), public meetings, information sessions, workshops, or other activities designed to identify and encourage the participation of these populations and tribes.

2. How did you identify and address existing and new disproportionate environmental and public health impacts on minority, low-income, and indigenous populations?

This question asks you to document the proactive steps taken to identify and address disproportionate impacts on the public health and environment of these populations. This could include any investigation and characterization you performed of geographic areas or populations that are likely to be most affected by your action. As part of this evaluation, you are encouraged to look at the distribution of the positive environmental and health consequences from our activities. You should ensure that you have identified and addressed issues that are of concern to populations with the greatest need for environmental and public health protection through your activities.

3. How did actions taken under #1 and #2 impact the outcome or final decision?

This question asks you to describe how the analysis of impacts and the public involvement opportunities made a difference in the outcome of the action or why they made no difference. This would include a brief discussion of how decision-makers considered the information on impacts and the concerns articulated by these populations, what actions were taken as a result, and the rationale for the decisions.

You should note that not all actions will raise EJ concerns. For actions that do not raise EJ concerns, you can answer these questions by showing that the action either:

- Underwent a screening process designed to identify those actions that may raise potential EJ concerns and those that do not, or
- After thorough research and analysis, you have made a determination that your action does not involve any EJ concerns.

Rulemaking Gateway

During the course of developing the PABP and DABP, your office may alter its belief that an action might be of particular interest to or have particular impacts upon minority, low-income, or indigenous populations, or tribes. Should such a change occur, you should alter the answer you provide to the EJ Question in RAPIDS (illustrated in the section titled "ADP Steps 1 and 2"). The EJ Question is on the Maintenance Form for every action in RAPIDS and can be altered at any time. Changes to Tier 1 and Tier 2 actions are updated once a month on the Rulemaking Gateway so the public can access EPA's latest thinking about an action.

ADP Step 6 – Management Approval of the DABP

The review and approval of the DABP provides another important opportunity for you to check in with your management to determine whether and how potential EJ concerns will be identified and considered during the development of the action. For example, during the formal cross-Agency review of the draft DABP, the workgroup and other reviewers of the draft DABP (e.g., OEJ or the lead office's EJ Coordinator) can assess whether the DABP outlines activities for identifying or considering EJ concerns. The approving official can also use this as an opportunity to consider how well the DABP addresses EJ concerns before approving the DABP.

Does the DABP Address EJ?

The DABP presents the plan that implements the management decision regarding the level of analysis and engagement of stakeholders.

Once the DABP is approved, management has determined the appropriate level of analysis and engagement for your action. In the absence of any compelling circumstances that would cause management to revisit this determination, you should follow the direction provided by management in the DABP for the remaining steps of the ADP.

ADP Step 7 – Data Collection, Analysis and Consultation, and Development of Regulatory Options

In this step, you should implement the DABP and investigate the problem, gather relevant information, consult with stakeholders and affected communities, and develop options for resolving the problem.²⁵ Integrated into all of these activities should be the consideration of whether there are EJ concerns, and if so, how these concerns might be addressed. You should use the Agency's available EJ assessment tools to determine the extent to which the action has potential EJ concerns; complete EJ-related consultation or public participation, as appropriate; and analyze any EJ concerns.

Although analyses to evaluate EJ concerns will vary from action to action, they typically have the same starting point. Generally, you should describe the estimated or current baseline impacts of the pollutant, process, or activity that the action is concerned with. It is particularly important to characterize the potential impacts on minority, low-income, and indigenous populations. The analysis should cover the full range of options considered to address those impacts and should provide a sufficient level of detail to distinguish major environmental or public health impacts across the options for these population groups.

The process of getting to the "final" options is usually an iterative process. As analyses become more detailed, you should fine-tune the options to maximize benefits, reduce costs, and increase feasibility. At the end of the process, the detailed final options are supported by detailed analyses sufficient to provide support for option selection. The detailed analysis should 1) provide information that will allow decision-makers to select the final action and 2) fulfill executive and statutory requirements for regulatory analysis.

²⁵ See previous discussion about preparing the DABP. The DABP should include a consultation plan that describes how the workgroup will achieve meaningful involvement, particularly for those stakeholders that may have historically not been able to participate. In addition, the workgroup should consult the *Agency's Risk Characterization Handbook*, at <http://www.epa.gov/osa/spc/pdfs/rchandbk.pdf> which provides a single, centralized body of risk characterization implementation guidance for Agency risk assessors and risk managers to help make the risk characterization process transparent and the risk characterization products clear, consistent and reasonable.

The detailed analysis also should produce documents that describe the basis for the regulatory decision to stakeholders and the public. You can include the detailed analysis evaluating EJ concerns in the Economic Analysis (EA) or the Regulatory Impact Analysis (RIA), or as an attachment. Alternatively, you can reference the analysis with only a summary in the actual text of the EA or RIA. Either of these approaches will allow for easy review of the technical aspects of the assessment by experts in the field or interested stakeholders, and allow for easy revision to the EA or RIA if aspects of the assessment change in response to new data or public comments.

ADP Step 8 – Options Selection

Options selection is the last step in the ADP before you complete drafting the action. In this step, you identify the significant issues and several options to resolve each issue. Senior management then selects those options that would best achieve the goals of the action. Selecting an action from among many options is a complex process. The extent to which EJ concerns factor into the process will vary considerably across actions, and will depend in large part on the operative requirements of the statute under which the action is being taken.

What Happens at Options Selection?

- In presenting the options, address the EJ concerns identified, using the core management questions as your guide.
- Managers consider EJ concerns in selecting options.
- You document what was done.

In presenting the options to senior management for final decision-making, you have another opportunity to consider whether identified EJ concerns have been addressed. Management will also have an opportunity to confirm that you have considered and addressed EJ concerns, including any necessary consultations to achieve meaningful involvement. Your options selection presentation should describe your activities and efforts to assess identified EJ concerns and to involve affected communities and stakeholders. The presentation should also describe what actions are recommended to ensure that EJ concerns are addressed by each of the options being presented. You should be prepared to discuss the options under consideration in the action (e.g., pollution control options) in light of their impacts on minority, low-income, and indigenous populations, including reductions in exposure or risk.

In presenting the results of the analysis evaluating EJ concerns to management, you should be aware of the specific statutory and other important criteria management will use to select an option. Where EJ concerns represent the major consideration for selecting an option, it is vital that the nature and magnitude of impacts be clearly presented in some detail. For example, the following questions might be answered:

- Are there studies documenting impacts? How complete are the studies?
- Is there indication that certain populations are particularly sensitive?
- What are the qualitative and quantitative differences?

In addition, you should be prepared to discuss the management questions outlined above in [Section A](#). You should also note that actions that impact the availability of information or the ability to participate meaningfully in the implementation of a program may have indirect impacts on these populations and tribes that should be considered. For example, a rule that

loosens or tightens reporting requirements for regulated industries may make it easier or harder for communities to be effective watchdogs for facilities that are of concern to them. This kind of impact should be considered.

Rulemaking Gateway

During the course of your analyses (Step 7) and Options Selection (Step 8), your office may alter its belief that an action might be of particular interest to or have particular impacts upon minority, low-income, or indigenous populations, or tribes. Should such a change occur, you should alter the answer you provide to the EJ Question in RAPIDS (illustrated in the section titled "ADP Steps 1 and 2"). The EJ Question is on the Maintenance Form for every action in RAPIDS and can be altered at any time. Changes to Tier 1 and Tier 2 actions are updated once a month on the Rulemaking Gateway so the public can access EPA's latest thinking about an action

ADP Step 9 – Preparation of the Action and Supporting Documents

In this step, you prepare the action under the leadership of the workgroup chair. In the case of a regulatory action, this step includes preparing the rule and preamble and the supporting documents. The evaluation of EJ concerns is part of this step.

At this stage, you may document how you identified, assessed, and addressed EJ concerns and how you achieved the meaningful involvement of minority, low-income, and indigenous populations, and tribes. Even if you concluded there were no EJ concerns, your activities that led to that conclusion should be documented. It is important that pertinent documents relating to EJ concerns are understandable and readily accessible to the public in the docket for the action.

In general, the preamble for the action should clearly state how the action is supported by the results of the analyses to evaluate EJ concerns. If the data to characterize EJ concerns was insufficient or inadequate, the preamble should describe clearly the Agency's efforts to search for data to characterize risks and how the regulatory decision addressed the data gaps. Suggested template language for addressing E.O. 12898 in preambles is available in the ADP library (<http://intranet.epa.gov/adplibrary>) and covers both proposed and final rules. However, your documentation is not limited to the inclusion of appropriate language in the preamble to address compliance with E.O. 12898.

What is FAR?

FAR is the last point for internal EPA review of an action, and all FAR comments reflect the views of each participating AA/RA. For Tier 1 and 2 actions, a FAR meeting is chaired by OPEI's Regulatory Management Division and serves to confirm that: all issues have been resolved or elevated; the action package is ready for OMB submission (if required) or signature; and all EPA and external requirements have been met.

ADP Step 10 – Final Agency Review (FAR)

Once the action has been developed, a package is presented to the workgroup for FAR. The FAR package consists of the final drafts of the action itself [e.g., the Federal Register (FR) document representing the proposed rule], the supporting documents (e.g., the economic impact analysis and, if prepared separately,

any scientific analysis), the Action Memorandum, and any other relevant documents [e.g., the Information Collection Request (ICR), Communications Plan].

As part of the draft Action Memorandum, you should specifically address the management questions identified in [Section A](#) above. These answers will accompany the action when it goes to the Administrator or other Agency official for signature.

This is the final opportunity for you, management, and, if appropriate, the EJ Coordinator for the lead office, to consider whether identified EJ concerns have been considered and addressed, and to ensure that you have properly documented those efforts.

ADP Steps 11 & 12 – Office of Management and Budget (OMB) Review (if “significant” under E.O. 12866)

If the regulatory action requires OMB review, you will have to prepare a package for submission to OMB. Although the package will generally include the same documents identified above, only the FR document and supporting documents go to OMB. The package is submitted through your AA/RA's representative to OPEI's Regulatory Management Division (RMD), for transmittal to OMB. Once AA/OPEI approves the transmittal of the package to OMB, RMD submits the action to OMB. For more details, see the *EPA's Action Development Process: Guidance for EPA Staff on Developing Quality Actions* (<http://intranet.epa.gov/adplibrary>).

As the lead office revises the action based on discussions with OMB, it should be aware of the measures taken to address the identified EJ concerns so that those efforts are not inadvertently undone or adversely affected by changes made to the action during OMB review. Changes made by OMB should be documented and included in the docket.

Rulemaking Gateway

During OMB review, your office may alter its belief that an action might be of particular interest to or have particular impacts upon minority, low-income, or indigenous populations, or tribes. Should such a change occur, you should alter the answer you provide to the EJ Question in RAPIDS (illustrated in the section titled “ADP Steps 1 and 2”). The EJ Question is on the Maintenance Form for every action in RAPIDS and can be altered at any time. Changes to Tier 1 and Tier 2 actions are updated once a month on the Rulemaking Gateway so the public can access EPA's latest thinking about an action.

ADP Step 13 – Signature and Publication

As part of this step in the process, the lead program prepares the action for signature by the designated Agency official and subsequent publication in the FR. Most tiered actions are signed by the Administrator. The lead AA/RA is responsible for requesting the Administrator's signature via an Action Memorandum. The lead AA/RA then submits the signature package to OPEI's RMD. Once the AA/OPEI verifies that the action is ready for signature, RMD transmits the package to the Office of the Executive Secretariat for the Administrator's signature. For actions not signed by the Administrator, final verification that the action is ready for signature is the responsibility of the lead program.

Once signed by the appropriate official, the FR document is processed for submission to OPEI²⁶, which is responsible for transmitting the document to the Office of the Federal Register for final publication. In addition, you should ensure that all relevant documentation

²⁶ The Office of Chemical Safety and Pollution Prevention has a separate FR submission process.

regarding your consideration of EJ concerns during the development of the action is included in the docket for the action.

ADP Step 15 – Soliciting and Accepting Public Comment

This step provides another opportunity for you to consider ways to ensure that the public comment process allows for meaningful involvement of affected communities and tribes, both in terms of providing a sufficient comment period and in terms of notification, communication, or outreach to actively engage affected communities and tribes. This may include holding one or more public meetings or hearings in or near affected communities and tribes. If a public meeting and/or hearing is held, you should ensure there is sufficient notice about it and that it is scheduled at a time and place convenient to the affected communities and tribes, with appropriate translation services. These activities may also be scheduled prior to the issuance of the proposal and related public comment period.

Successful solicitation of public comments from affected communities and tribes may incorporate tailored outreach materials that are concise, understandable, and readily accessible to the communities you are trying to reach. It may be necessary to identify different ways to best engage your target community. For example, you may want to consider whether to enhance outreach to potentially affected communities, including the use of Web 2.0 tools for online dialogues, blogs, tweets, etc., or other available state-of-the-art technologies. For remote towns and villages, local radio stations, local newspapers, and posters at village or community centers may represent the most effective approach.

ADP Step 16 – Developing the Final Action

Even before the comment period ends, you can begin reviewing public comments. When preparing for the final stage of the action, your first step is to evaluate the public comments, which provides another opportunity for you to consider potential EJ concerns that were identified and discussed in the preamble, as well as an opportunity to consider potential EJ concerns raised in public comments.

In considering comments, you should evaluate whether the consideration of EJ concerns in the analyses performed for the proposed action needs to be refined or revised, and if so, how. If EPA did not consider EJ concerns in their analyses, you should consider whether the public comments raise issues that may warrant reconsideration.

You should then brief management on the scope of the comments received and recommend how to respond to comments. Management will consider the recommendations and will then provide guidance on how to proceed in developing the final action (e.g., this is equivalent to Early Guidance as discussed previously). Management guidance will also identify which process steps you should follow in preparing the final action. These steps may vary based on the nature and extent of comments, or other factors.

You are expected to consider and respond to all significant public comments that are relevant to the proposal and submitted during the applicable comment period. The consideration of significant comments, including how they are being addressed in the final action, should be